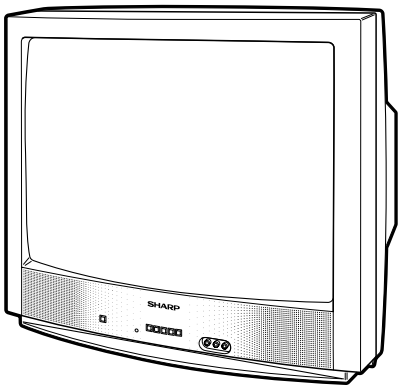
SHARP SERVICE MANUAL

S71Y1CR25S10/



COLOR TELEVISION

Chassis No. SN-012

MODEL CR25S10

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

CONTENTS

Page

- ELECTRICAL SPECIFICATIONS 1
- IMPORTANT SERVICE SAFETY PRECAUTION 2
- LOCATION OF USER'S CONTROL 6
- INSTALLATION AND SERVICE INSTRUCTIONS 7
- CHASSIS LAYOUT 13
- BLOCK DIAGRAM 14
- SCHEMATIC DIAGRAMS 15
- PRINTED WIRING BOARD ASSEMBLIES 21
- REPLACEMENT PARTS LIST 24
- PACKING OF THE SET 31

ELECTRICAL SPECIFICATIONS

POWER INPUT ..... 120 V AC 60 Hz
POWER RATING ..... 103 W
PICTURE SIZE ..... 2,032cm^2 (315sq inch)
CONVERGENCE ..... Magnetic
SWEEP DEFLECTION ..... Magnetic
FOCUS ..... Hi-Bi-Potential Electrostatic
INTERMEDIATE FREQUENCIES
  Picture IF Carrier Frequency ..... 45.75 MHz
  Sound IF Carrier Frequency ..... 41.25 MHz
  Color Sub-Carrier Frequency ..... 42.17 MHz (Nominal)
AUDIO POWER ..... 1.5 W+1.5 W (at 10% distortion and Dual CH Operate)
SPEAKER
  SIZE ..... 8 cm (Round)
  VOICE COIL IMPEDANCE ..... 32 ohm at 400 Hz
ANTENNA INPUT IMPEDANCE
  VHF/UHF ..... 75 ohm Unbalanced
TUNING RANGES
  VHF-Channels ..... 2 thru 13
  UHF-Channels ..... 14 thru 69
  CATV Channels ..... 1 thru 125 (EIA, Channel Plan U.S.A.)

Specifications are subject to change without prior notice.

SHARP CORPORATION

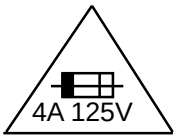
This document has been published to be used for after sales service only.
The contents are subject to change without notice.

IMPORTANT SERVICE SAFETY PRECAUTION

■ **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit and the horizontal output circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.
   To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



CAUTION: FOR CONTINUED PROTECTION AGAINST A RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 4A-125V FUSE.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.
   It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.
2. It is essential that servicemen have available at all times an accurate high voltage meter.
   The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value –no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver.
   Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION

(Continued)

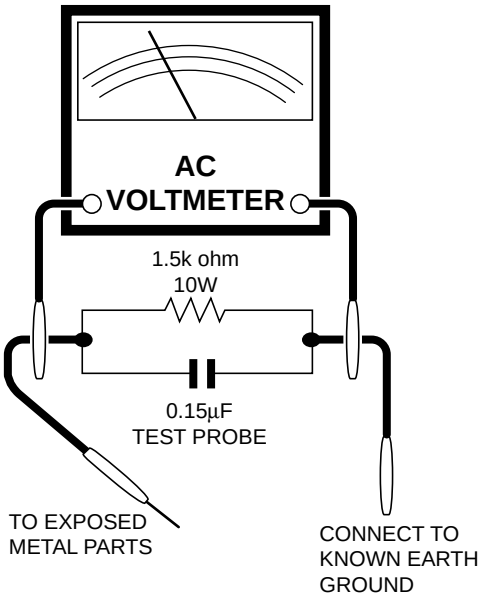
BEFORE RETURNING THE RECEIVER

(Fire & Shock Hazard)

Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.

- Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
- Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15µF capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
- Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.
- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon, etc.) and measure the AC voltage drop across the resistor.
  AII checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)
  Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



SAFETY NOTICE

Many electrical and mechanical parts in television receivers have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.
Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by "⚠" and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

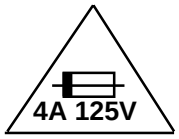
For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

■ **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

AVERTISSEMENT

1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.
3. Les déversoirs thermiques à semi-conducteurs peuvent présenter un danger de choc électrique lorsque le réceqteur est en marche.
4. Le châssis de ce récepteur a deux systèmes de mise à la terre qui sont séparés par un matériau isolant. Le système de mise à la terre non-isolée (chaud) est pour le circuit du régulateur de tension +B et le circuit de sortie horizontale. Le système de mise à la terre isolé est pour les basses tensions C. C. +B et le circuit secondaire du transformateur de haute tension.



PRECAUTION:POUR LA PROTECTION CONTINUE CONTRE LES RISQUES D'INCENDIE, REMPLACER LE FUSIBLE PAR UN FUSIBLE DE MEME TYPE 4A-125V.

REPARATION DU SYSTEME A HAUTE TENSION ET DU TUBE-IMAGE

Lors de la réparation de ce systéme, supprimer la charge statique en branchant une résistance de 10 k en série a vec un fil isolé (comme une sonde d'essai) entre la mise à la terre du tube-image et le fil d'anodel. (Le corden d'alimentation doit être retiré de la prise murale.)

1. Il est à noter que le tube-image de ce récepteur est intégralement protégé contre l'implosion.
2. Par mesure de sécurité, changer le tube-image pour un tube du même numéro de type.
3. Ne pas lever le tube-image par son col.
4. Ne manipuler le tube-image qu'en porant des lunettes incassables et qu'après avoir déchargé totalement la haute tension.

LIMITES DES RADIATIONS X ET DE LA HAUTE TENSION

1. Tout le personnel réparateur doit être instruit des instructions et procédés relatifs aux radiations X.
   Le tube-image, seule source de rayons X dons les téléviseurs transistorisés, n'émet pourtant pas de rayons mesurables si la haute tension est maintenue à un niveau préconisé dans la section "Vérification de la haute tension".
   C'est seulement quand la haute tension est excessive que les rayons X peuvent entrer dans l'enveloppe du tube-image y compris le conducteur de verre. Il est important de maintenir la haute tension en-dessous du niveau spécifié.
2. Il est essentiel que le réparateur ait sous la main un voltmètre à haute tension qui doit être périodiquement étalonné.
3. La haute tension doit toujours être maintenue à la valeur de régime-et pas plus haute. L'opération à des tensions plus élevées peut entraîner une panne du tube-image ou du circuit à haute tension et, dans certaines conditions, peut entraîner une radiation dépassant les niveaux préscrits.
4. Quand le régulateur à haute tension fonctionne correctement, il n'y a aucun problème de radiation X. Chaque fois qu'un châssis couleurs est réparé, la luminosité doit être examinée bout en contrôlant la haute tension à l'aide d'un voltmètre pour s'assurer que la haute tension ne dépasse pas la valeur spécifiée et qu'elle soit correctement réglée.
5. Ne pas utiliser un tube-image autre que celui spécifié et ne pas effectuer de modifications déconseillées du circuit à haute tension.
6. Lors de la recherche des pannes et des mesures d'essai sur un récepteur qui présente une haute tension excessive, éviter de s'approcher inutilement du récepteur.
   Ne pas faire fonctionner le récepteur plus longtemps que nécessaire pour localiser la cause de la tension excessive.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

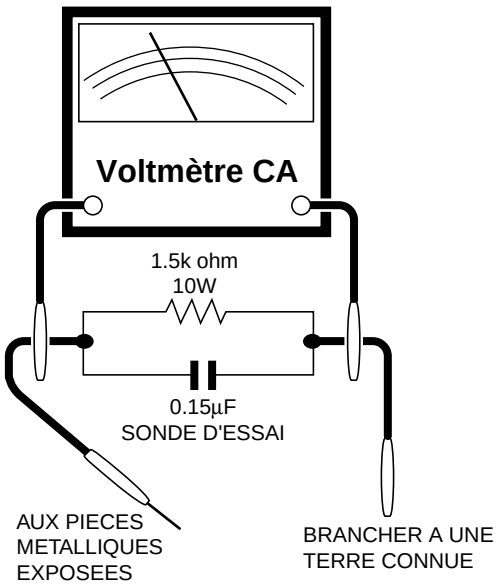
(Suite)

VERIFICATIONS CONTRE L'INCEN-DIE ET LE CHOC ELECTRIQUE

Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

1. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
2. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistance-capacité, les isolateurs mécaniques, etc.
3. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la facon suivante:

- Brancher le cordon d'alimentation directem-ent à une prise de courant de 120V. (Ne pas utiliser de transformateur d'isolation pour cet essai).
- A l'aide de deux fils à pinces, brancher une résistance de 1,5 k 10 watts en parallèle avec un condensateur de 0,15µF en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
- Utiliser un voltmètre CA d'une sensibilité d'au moins 5000 /V pour mesurer la chute de tension en travers de la résistance.
- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance.
  Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adpatation non polarisée peut être utilisée dans le but de terminer ces vérifications.)
  Tous les courants mesurés ne doivent pas dépasser 0,5 mA.
  Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.

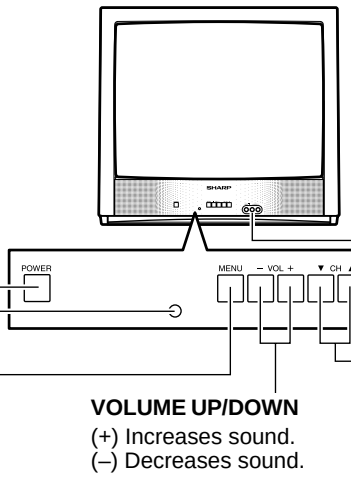


AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les téléviseurs présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue. Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont identifiées par la marque " ⚠ " et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques.
Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies, radiations X ou autres accidents.

LOCATION OF USER'S CONTROL

Front Panel



POWER
Press → On.
Press again → Off.

SENSOR AREA FOR REMOTE CONTROL

MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

VOLUME UP/DOWN
(+) Increases sound.
(–) Decreases sound.

VIDEO/AUDIO IN2 TERMINALS

CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Press both at the same time to access the MAIN MENU screen.

Basic Remote Control Functions

POWER
Press → On.
Press again → Off.

REMOTE KEYPAD
Accesses any channel from keypad.

FLASHBACK
Returns to previous channel.

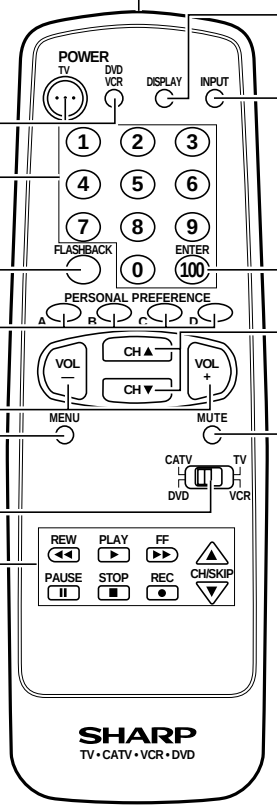
PERSONAL PREFERENCE
With the Personal Preference buttons, you can program your favorite programs by using the 4 categories A, B, C and D. The channels can be accessed quickly by using these buttons.

VOLUME UP/DOWN
(+) Increases sound.
(–) Decreases sound.
• In menu mode, changes or selects the TV adjustments.

MENU
Press → Accesses MAIN MENU.
Press again → Exits MAIN MENU.

CATV/DVD-TV/VCR MODE SELECT SWITCH
In TV/VCR position, sends power and channel select commands (Channel up/down and Random Access buttons) to the TV and VCR control.
In CATV/DVD position, sends power and channel select commands to a cable TV converter and DVD control.

DVD/VCR CONTROL



Infrared Transmitter Window

DISPLAY
Press → Displays receiving channel for four seconds.
Press again → Removes display.
• Temporarily displays receiving channel when in Closed Caption mode.

INPUT
Press → Switch to external video INPUT 1 mode.
Press 2 times → Switch to external video INPUT 2 mode.
Press 3 times → Switch back to the original TV mode.

ENTER
Used in some instances where a Cable Converter Box requires an "enter" command after selecting channels, when using the REMOTE KEYPAD button.

CHANNEL UP/DOWN
(▲) Selects next higher channel.
(▼) Selects next lower channel.
• Moves the " ⬍ " mark of the MENU screens.

MUTE
Press → Mutes sound.
Press again → Restores sound.
• CLOSED CAPTION appears when sound is muted.

Note:
- The above shaded buttons on the Remote Control glow in the dark. To use the glow-in-the-dark display on the remote control, place it under a fluorescent light or other lighting.
- The phosphorescent material contains no radioactive or toxic material, so it is safe to use.
- The degree of illumination will vary depending on the strength of lighting used.
- The degree of illumination will decrease with time and depending on the temperature.
- The time needed to charge the phosphorescent display will vary depending on the surrounding lighting.
- Sunlight and fluorescent lighting are the most effective when charging the display.

INSTALLATION AND SERVICE INSTRUCTIONS

Note: (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.
(2) Before performing adjustments, the TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 4.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, B+ system, test the X-Radiation protection circuit to ascertain proper operation as follows:

1. Apply 120V AC using a variac transformer for accurate input voltage.
2. Allow for warm up and adjust all customer controls for normal picture and sound.
3. Receive a good local channel.
4. Connect a digital voltmeter to TP653 and make sure that the voltmeter reads 21.9 ±1.4V.
5. Apply external 27.8V DC at TP653 by using an external DC supply, TV must be shut off.
6. To reset the protector, unplug the AC cord and make a short circuit between TP651 and TP652. Now make sure that normal picture appears on the screen.
7. If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "S03" and Bus data "01" (Y-mute on).
4. The voltage should be approximately, 27.8kV (at zero beam).
   If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

Note: There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjusment is required.

To enter the service mode and exit service mode.

While pressing the Vol-up and Ch-up buttons at the sametime, plug the AC cord into a wall socket.
Now, the TV set is switched on and enters the service mode.
To exit the service mode, turn the television off by pressing the power button.

1. Service mode.

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer control are in their proper (reset) position.

2. Service number selection.

In the service mode, you will see the window screen as window ①. There are 4 adjustment categories ②DEF, ③SIGNAL, ④FEATURE, ⑤FIX VALUE as show in **Figure A**.

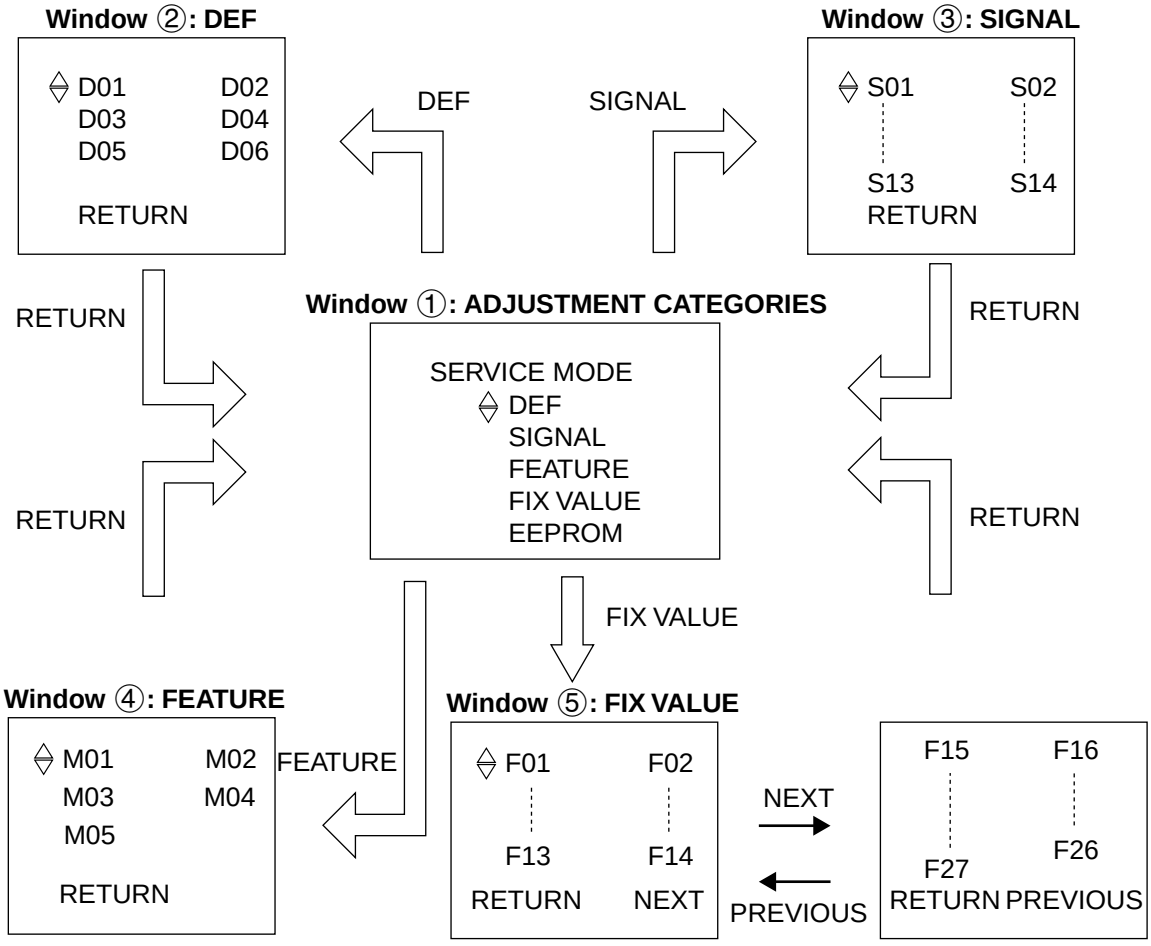


Figure A: ADJUSTMENT CATEGORIES

Press CH UP/DOWN button for selection and enter by VOL UP or VOL DOWN.
Press CH UP/DOWN button to select the adjustment item and VOL UP/DOWN to adjust the data number for each categories.
(OSD disturbance can be erased by R/C display key)
(Note: EEPROM - factory used only)

Below are the adjustments ranges and initial values for FIX VALUE category.

FIX VALUE

SERVICE POSITION	ADJUST ITEM	DATA		
		RANGE	INITIAL VALUE	(Hex)
F01	OPTION 1	00-FF	B3	A3
F02	OPTION 2	00-FF	07	07
F03	E-SAVE	00-3F	2A	2A
F04	TUNER SETUP	00, 01	00	00
F05	R-TONE RD	00-7F	03	03
F06	R-TONE BD	00-7F	7C	7C
F07	B-TONE RD	00-7F	00	00
F08	B-TONE BD	00-7F	04	04
F09	FM LEVEL	00-1F	16	16
F10	AFC GAIN	00, 01	00	00
F11	G DRIVE	00, 0F	0F	0F
F12	FBT BLK SW	00, 01	01	01
F13	V COMP	00-07	07	07
F14	OSD CONT	00-03	01	01
F15	SHARPNESS	00-3F	0D	19
F16	FLT SYS	00-07	01	01
F17	KILLER OP	00-07	02	02
F18	PRE SHOOT	00-03	00	00
F19	CORING	00-03	04	04
F20	DC REST	00-03	02	02
F21	BS START	00-03	01	01
F22	BS GAIN	00-03	01	01
F23	ABL START	00-07	00	00
F24	R/B ANGLE	00-0F	08	08
F25	H BLK R	00-0F	03	03
F26	H BLK L	00-0F	00	00
F27	YC	00-07	05	04

Table - A

Below are the ranges and initial values for each adjustment and in each categories.

DEF

SERVICE POSITION	ADJUST ITEM	DATA		ADJUSTMENT CONTENTS
		RANGE	INITIAL VALUE	
D01	H-PHASE	00-1F	0C	
D02	V-SIZE	00-7F	40	
D03	V-POSITION	00-3F	20	
D04	CC-POSITION	00-FF	1A	
D05	V-LINEARITY	00-1F	18	Must be "13"
D06	V-S-CORRECTION	00-1F	0C	Must be "10"

Table - B

SIGNAL

SERVICE POSITION	ADJUST ITEM	DATA		ADJUSTMENT CONTENTS
		RANGE	INITIAL VALUE	
S01	RF AGC	00-3F	14	
S02	VIDEO LEVEL	00-07	03	
S03	Y-MUTE	00-03	00	"01": Y-MUTE, "02": V-STOP & Y-MUTE "03": Activate color killer circuit.
S04	SUB BIAS	00-FF	30	Must be "30"
S05	R-BIAS	00-FF	00	
S06	G-BIAS	00-FF	00	
S07	B-BIAS	00-7F	00	
S08	R-DRIVE	00-7F	53	
S09	B-DRIVE	00-7F	53	
S10	CONTRAST	00-7F	5A	
S11	TINT	00-7F	40	
S12	COLOR	00-7F	40	
S13	BRIGHTNESS	00-7F	40	
S14	BRIGHTNESS 2	00-7F	40	

Note: Refer to the SERVICE ADJUSTMENT for each corresponding values.

Table - C

FEATURE

SERVICE POSITION	ADJUST ITEM	DATA		ADJUSTMENT CONTENTS
		RANGE	INITIAL VALUE	
M01	MS LEVEL	00-0F	0A	
M02	MTS-VCO	00-3F	20	
M03	FILTER	00-3F	1C	
M04	LOW SEPARATION	00-3F	20	
M05	HIGH SEPARATION	00-3F	1B	

Note: Refer to the SERVICE ADJUSTMENT for each corresponding values.

Table - D

Holding down both the Vol-up/Ch-down buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2102.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2102.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201.
IC2102	X		Holding down both the Vol-up/Ch-down buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2102.
IC3001	X		Adjust items related MTS only.
CRT	X		Adjust items related to picture tube only.

Table - E

■ SERVICE ADJUSTMENT

Note: Before making the service adjustment, make the bus data settings.

+B Adjustment

(1) For the chassis with the +B adjustment control

1. Receive a good local channel.
2. Select VIDEO ADJUSTMENT RESET on the menu to get the video reset.
3. Connect a DC voltmeter between the +B line (at SW transformer) of R611 and the ground terminal.
4. Adjust R738 so that the voltmeter should read 128.5+0.5V/-0.25V.

(2) For the chassis without the +B adjustment control

1. Receive a good local channel.
2. Select VIDEO ADJUSTMENT RESET on the menu to get the video reset.
3. Connect a DC voltmeter between the +B line (at SW transformer) of R611 and the ground terminal.
4. Make sure that the voltmeter reads 128.5±1.5V.

Video Level (TV Det Video Level) Adjustment

1. Receive a good local channel.
2. Enter the service mode signal category and select the service adjustment "S02".
3. Set the data value to "02" first, then adjust the data to "04". (If out of spec, readjust the data in the range of "00" to "07" to obtain a normal contrast level.)

RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode signal category and select the service adjustment "S01".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.

   Note: You have to exit the service mode first to select another channel.

Screen Adjustment

1. Connect to oscilloscope probe between TP854 and ground of the CRT unit.
2. Receive a good local channel.
3. Enter the service mode Signal category and set the service adjustment "S04" to step 30. Then select the service adjustment "S12" and set the data value to "00" to set the color level to the minimum level. (record the original data first). You may skip this step, if you selected a B/W picture or monoscope pattern. Set also the "S05/S06/S07" data to minimum level ("00").
4. Select the service adjustment "S03" and set the data value to "01" to turn off the luminance signal (Y-mute).
5. Select the service adjustment "S14" and adjust the data value to obtain 2.35 volts as shown in **Figure B**.
6. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
7. Adjust the service adjustment "S05" red, "S06" green, "S07" blue to obtain a good grey scale with normal white at low brightness level.
8. Select the service a adjustment "S03" and reset data to "00". Select the service adjustment "S12" and reset data to obtain normal color level.
9. Remove probe and reset the master screen control to obtain normal brightness range.

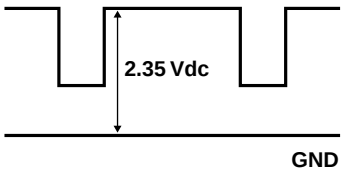


Figure B: WAVEFORM FOR SCREEN ADJUSTMENT

White Balance Adjustment

1. Receive a good local channel.
2. Select the service adjustment "S12" and set the data value to "00" to set the color level to the minimun. You may skip this step, if you selected a B/W picture or monoscope.
3. Alternately adjust the service adjustment data of "S08" and "S09" until a good grey scale with normal white is obtained.
4. Select the service adjustment "S12" and reset data to obtain normal color level.

Sub-Picture Adjustment

1. Receive a good local channel.
2. Make sure the customer picture control is set to maximum.
3. Enter the service mode and select the service adjustment "S10".
4. Adjust the data value to achieve normal contrast range.

Sub-Tint Adjustment

1. Receive a good local channel.
2. Set the customer tint control to the center of it's range.
3. Enter the service mode and select the service adjustment "S11".
4. Adjust "S11" data value to obtain normal fresh tones.

Sub-Color Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position.
3. Enter the service mode and select the service adjustment "S12".
4. Adjust "S12" data value to obtain normal color level.

Sub-Brightness Adjustment

1. Receive a good local channel.
2. Make sure the customer brightness control is set to center position.
3. Enter the service mode and select the service adjustment "S13".
4. Adjust "S13" data value to obtain normal brightness level.

Vertical-Size, V-Linearity and V-S Correction Adjustments

1. Receive a good local channel.
2. Enter the service mode DEF category and select the adjustment "D02" for Vertical Size, "D05" for V-Linearity and "D06" for V-S Correction Adjustment.
3. Set in order "D05" for V-Linearity, "D06" for V-S Correction and set the data to get the best linearity.
4. Then adjust "D02" data until it become a proper vertical size.

Horizontal Position Adjustment

1. Receive a good local channel.
2. Enter the service mode DEF category and select the adjustment "D01".
3. Adjust "D01" data value to center the picture.

Vertical-Phase Adjustment

1. Receive a good local channel.
2. Enter the service mode DEF category and select the adjustment "D03".
3. Adjust "D03" bus data to get the most acceptable vertical position.
   Note: The step range is 20 (32)+12 (3 steps)/ -20 (5 steps).
   (Push once move 4 steps.)

Caption Position Adjustment (Horizontal)

1. Receive a good local channel.
2. Enter the service mode DEF category and select the adjustment "D04".
3. A black text box will appear on the screen. (see **Figure C**. below)
4. Adjust "D04" data value to balance the text box position in the center. (A=B).

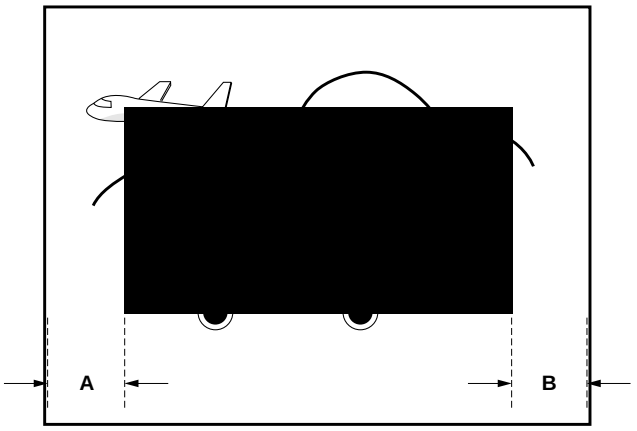


Figure C.

■ MTS ADJUSTMENT

MTS Level Adjustment

1. Feed the following monaural signal to pin (14) of IC3001.
   Monaural signal: 300Hz, 245mVrms
2. Connect the rms voltmeter to pin (39) of IC3001.
3. Enter the service mode and select the service adjustment "M01".
4. Adjust the data so that the rms voltmeter reads 490 ±10mVrms.

MTS VCO Adjustment

1. Keep the unit in no-signal state.
2. Connect the frequency counter to pin (39) of IC3001.
3. Connect a capacitor (100µF, 50V) in between positive(+) side of C3005 and ground.
4. Enter the service mode and select the service adjustment "M02"
5. Adjust the data so that the frequency counter reads 62.94 ±0.75kHz.

Filter Adjustment

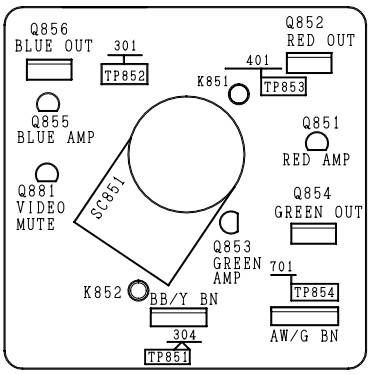
1. Feed the following stereo pilot signal to pin (14) of IC3001 .
   Stereo pilot signal: 9.4kHz, 600mVrms.
2. Enter the service mode and select the service adjustment "M03".
3. Adjust the data at the point where "OK" appears on the screen. The "OK" represents the approximate center of the adjustable range of the data.

Separation Adjustment

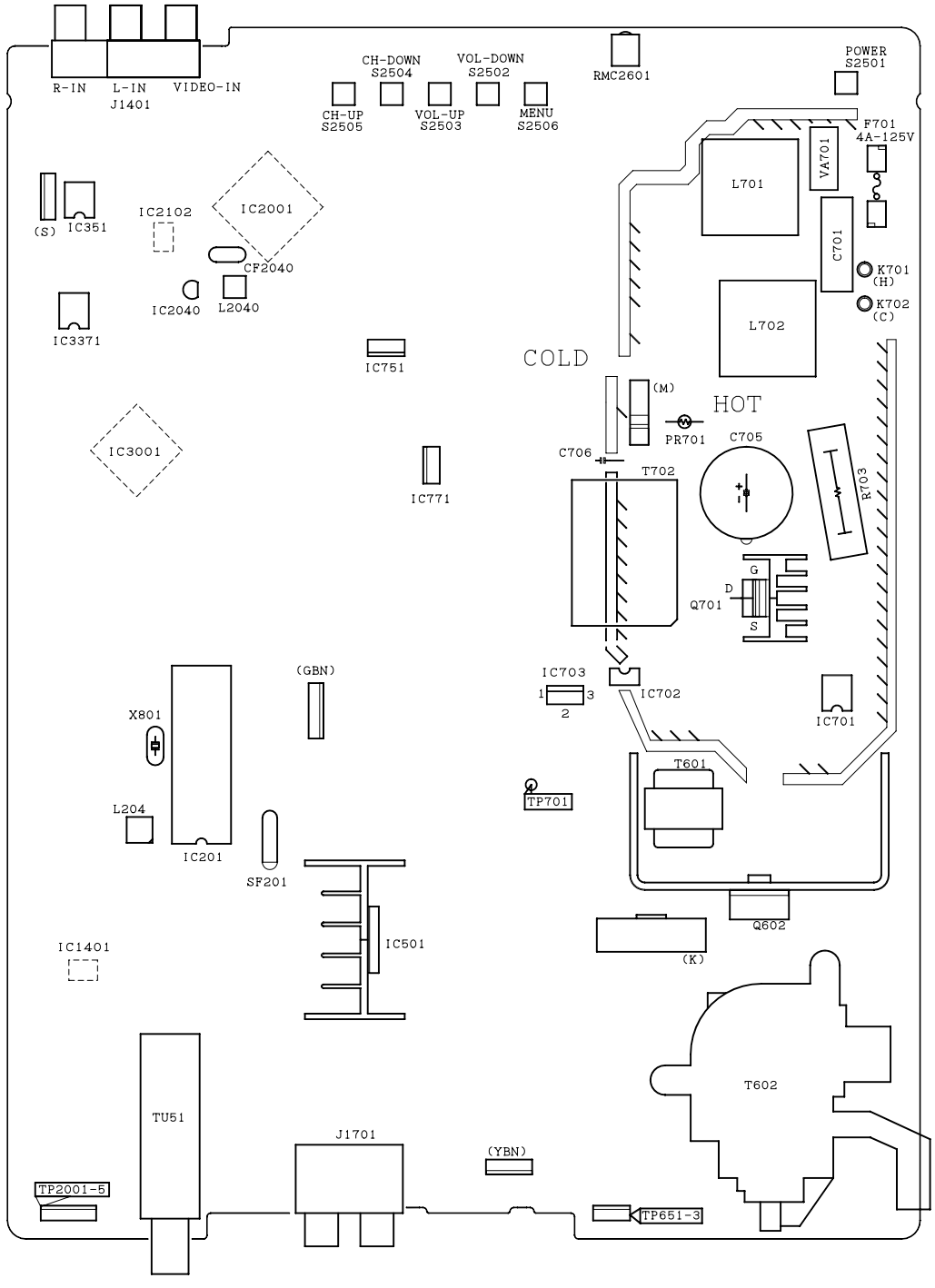
1. Connect the rms voltmeter to pin (39) of IC3001.
2. Receive the following composite stereo signal 1.
   Composite stereo signal: 30% modulation, left channel only, noise reduction on, 300Hz
3. Enter the service mode and select the service adjustment "M04".
4. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
5. Receive the following composite stereo signal 2.
   Stereo signal: 30% modulation, left channel only, noise reduction on, 3kHz
6. Enter the service mode and select the service adjustment "M05".
7. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
8. Take the above steps 1 thru 7 again for fine adjustment.

CHASSIS LAYOUT

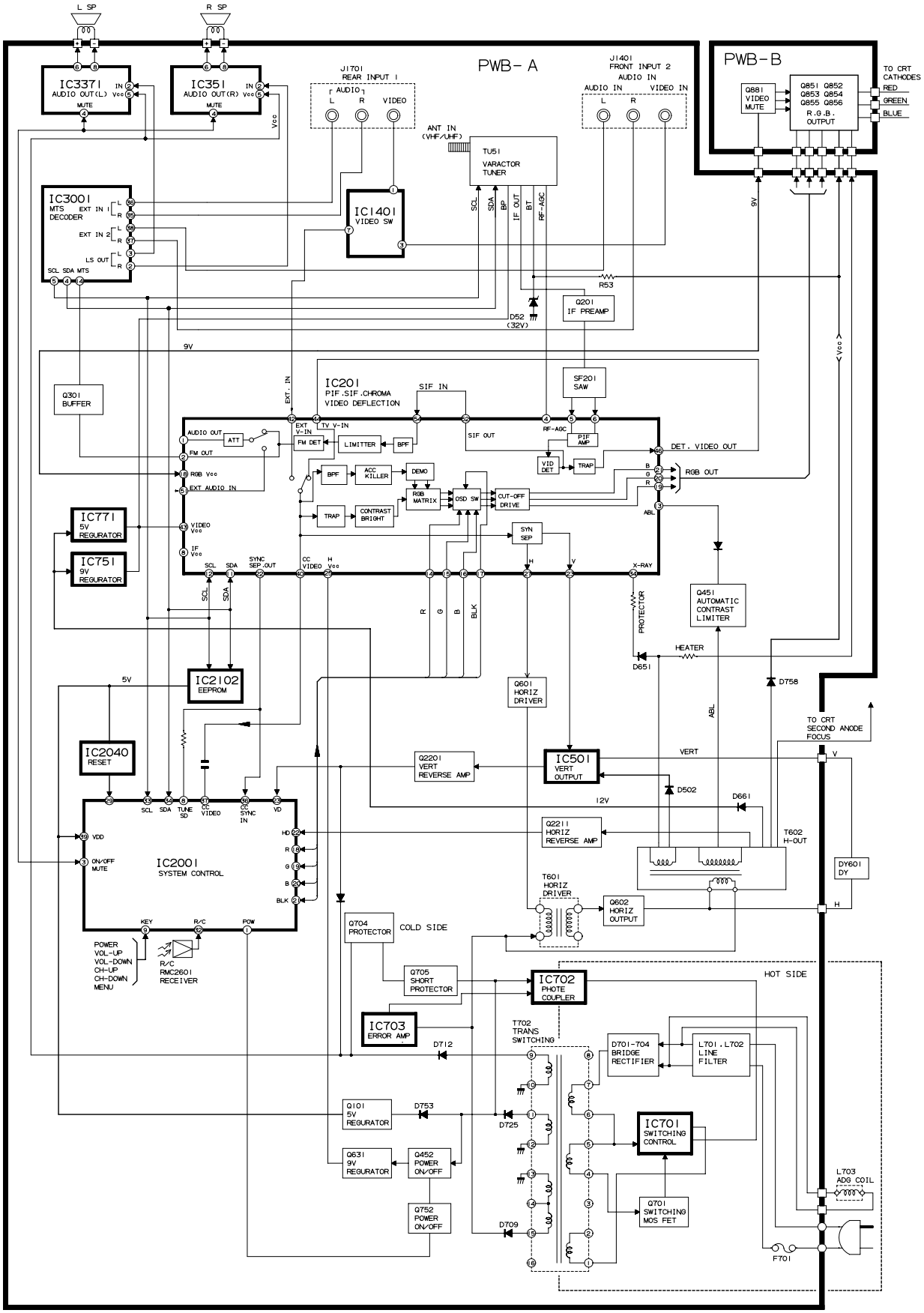
PWB-B



PWB-A



BLOCK DIAGRAM



DESCRIPTION OF SCHEMATIC DIAGRAM

NOTES:

1. *The unit of resistance "ohm" is omitted. (K=kΩ=1000Ω, M=MΩ)*
2. *All resistors are 1/16 watt, unless otherwise noted.*
3. *All capacitors are μ F, unless otherwise noted. (P=pF=μμF)*
4. *(G) indicates ±2% tolerance may be used.*
5. *⏚ indicates line isolated ground.*

VOLTAGE MEASUREMENT CONDITIONS:

1. *All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.*
2. *All voltages measured with 1000μ V B & W or Color signal.*

WAVEFORM MEASUREMENT CONDITIONS:

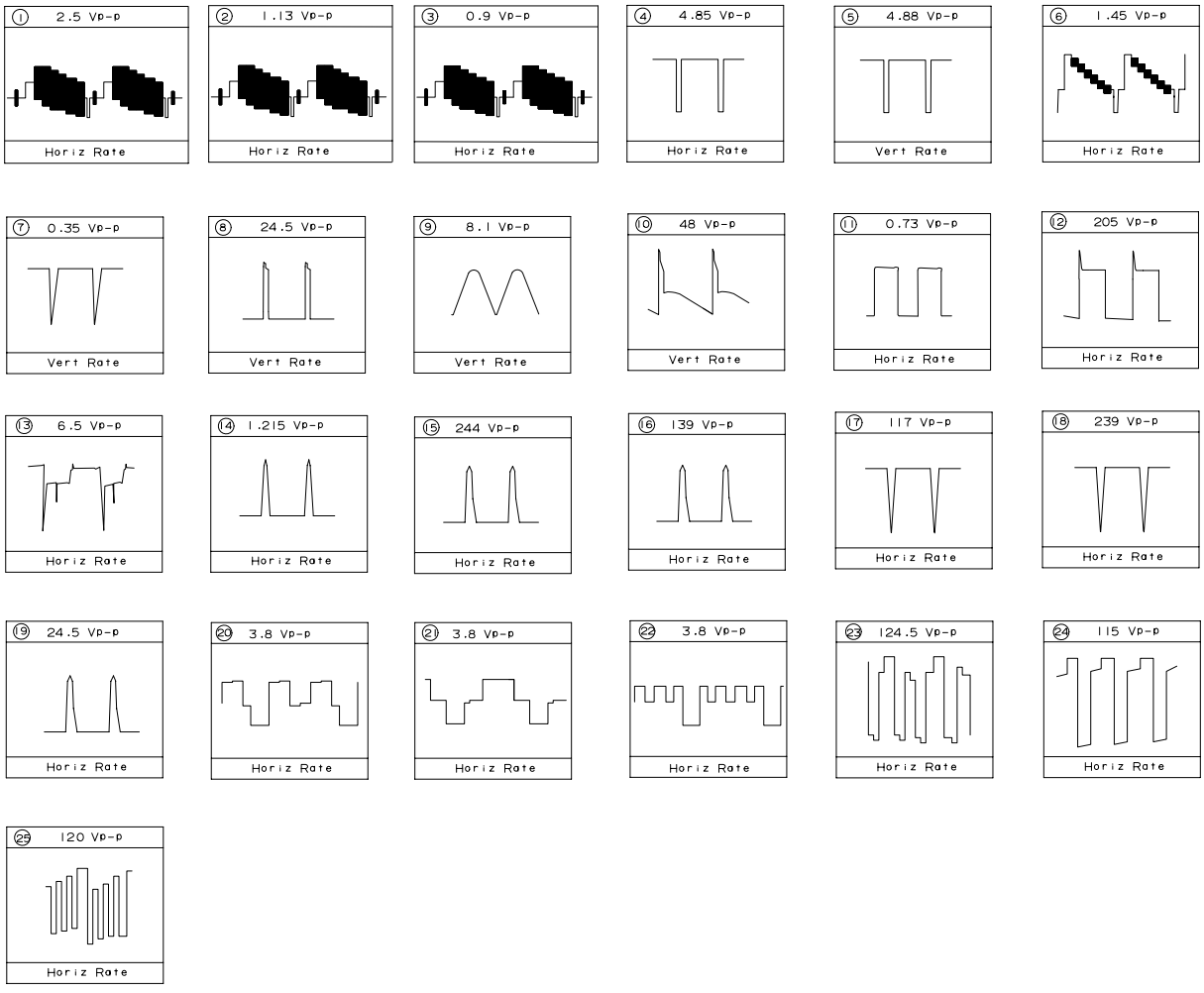
1. *Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.*
2. *indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)*

⚠ *AND SHADED ( ) COMPONENTS = SAFETY RELATED PARTS.*
▲ *MARK= X-RAY RELATED PARTS.*

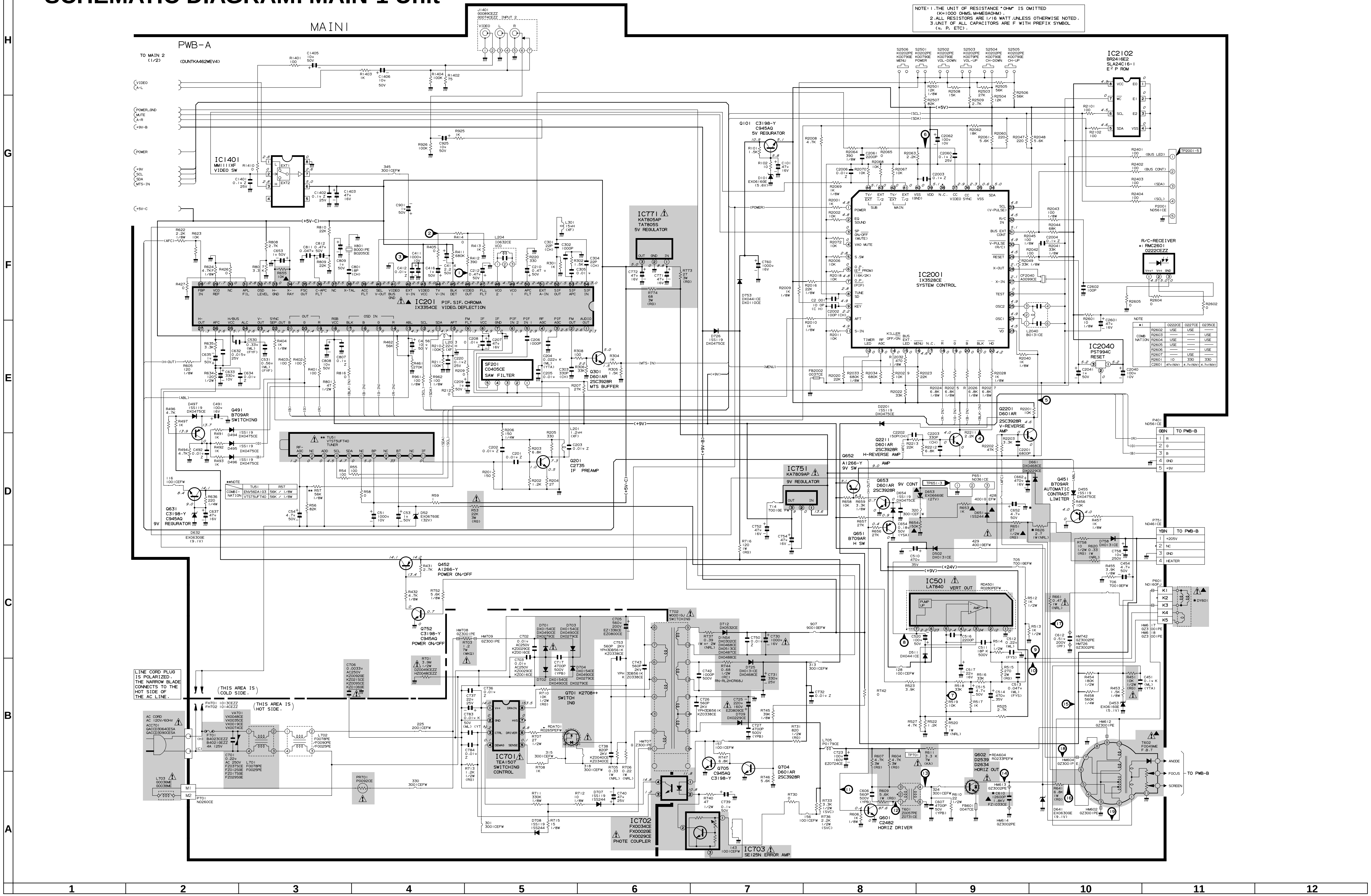
DRGANNES MARQUES ⚠ ET HACHRES ( ): PIECES RELATIVES A LA SECURITE.
MARQUE ▲ : PIECS RELATIVE AUX RAYONS X.

This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

WAVE FORMS



SCHEMATIC DIAGRAM: MAIN-1 Unit



MAIN1
PWB-A
TO MAIN 2 (1/2)
(DUNTKA462WEV4)
J1401 G0089CEZZ G0074CEZZ INPUT 2
VIDEO L R
NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED (K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL (u, P, ETC).
S2506 K0202PE K0079GE MENU
S2501 K0202PE K0079GE POWER
S2502 K0202PE K0079GE VOL-DOWN
S2503 K0202PE K0079PE VOL-UP
S2504 K0202PE K0079GE CH-DOWN
S2505 K0202PE K0079GE CH-UP
IC2102 BR2416E2 SLA24C16-1 E2 P ROM
IC1401 MM1111XF VIDEO SW
IC771 KA7805AP TA7805S 5V REGULATOR
Q101 C3198-Y C945AQ 5V REGURATOR
IC2001 IX3528CE SYSTEM CONTROL
IC201 PIF. SIF. CHROMA IX3354CE VIDEO. DEFLECTION
SF201 C0405CE SAW FILTER
Q301 D601AR 2SC3928R MTS BUFFER
R/C-RECEIVER *1 RMC2601 0222CEZZ
IC2040 PST994C RESET
Q491 B709AR SWITCHING
TU51 VTST5UF740 TUNER
Q201 C2735 IF PREAMP
Q631 C3198-Y C945AQ REGURATOR
Q452 A1266-Y POWER ON/OFF
Q752 C3198-Y C945AQ POWER ON/OFF
Q2201 D601AR 2SC3928R V-REVERSE AMP
Q2211 D601AR 2SC3928R H-REVERSE AMP
IC751 KA7809AP 9V REGULATOR
Q652 A1266-Y 9V SW
Q653 D601AR 2SC3928R 9V CONT
Q651 B709AR H SW
Q451 B709AR AUTOMATIC CONTRAST LIMITER
IC501 LA7840 VERT OUT
Q701 K2708++ SWITCHING
IC701 TEA1507 SWITCHING CONTROL
IC702 FX0034CE FX0002GE FX0029CE PHOTE COUPLER
IC703 SE125N ERROR AMP
Q705 C945AQ C3198-Y
Q704 D601AR 2SC3928R
Q601 C2482 HORIZ DRIVER
Q602 D2539 D2634 HORIZ OUT
T602 F0049ME F.B.T
ANODE FOCUS SCREEN - TO PWB-B
LINE CORD PLUG IS POLARIZED. THE NARROW BLADE CONNECTS TO THE HOT SIDE OF THE AC LINE.
THIS AREA IS COLD SIDE.
THIS AREA IS HOT SIDE.
AC CORD AC 120V/60Hz ACC701 QACCD3064CESA QACCD3090CESA
P401 N0561CE GBN TO PWB-B: 1 R, 2 G, 3 B, 4 GND, 5 +9V
P751 N0461CE YBN TO PWB-B: 1 +205V, 2 NC, 3 GND, 4 HEATER
P601 N0160FJ K1 K2 K3 K4 K5 *DY601
**NOTE TU51 R57 COMBI-NATION ENV56DA1G3 56K / 1/8W; VTST5UF740 56K / 1/8W
NOTE *1 0222CE 0227CE 0235CE
R2602 USE USE —; R2603 — — USE; R2604 USE — USE; R2605 USE — —; R2606 — — USE; R2607 — USE —; R2601 10 330 330; C2601 47u(50V) 4.7u(50V) 4.7u(50V)
H G F E D C B A
1 2 3 4 5 6 7 8 9 10 11 12

SCHEMATIC DIAGRAM: MAIN-2 Unit

NOTE: 1.THE UNIT OF RESISTANCE "OHM" IS OMITTED
(K=1000 OHMS, M=MEGAOHM).
2.ALL RESISTORS ARE 1/16 WATT.UNLESS OTHERWISE NOTED.
3.UNIT OF ALL CAPACITORS ARE F WITH PREFIX SYMBOL
(u, P, ETC).

MAIN2

PWB-A
(DUNTKA462WEV4)

INPUT 1
J1701
J0340CEZZ
VIDEO
L
AUDIO
R

TO MAIN 1
(2/2)
VIDEO
A-L
A-R
POWER_GND
+9V-B
+9V
POWER
MUTE
MTS-IN
SDA
SCL

TO SPEAKER
VSP0080PB04YA
P303
ND461CE
S4
S3
S2
S1

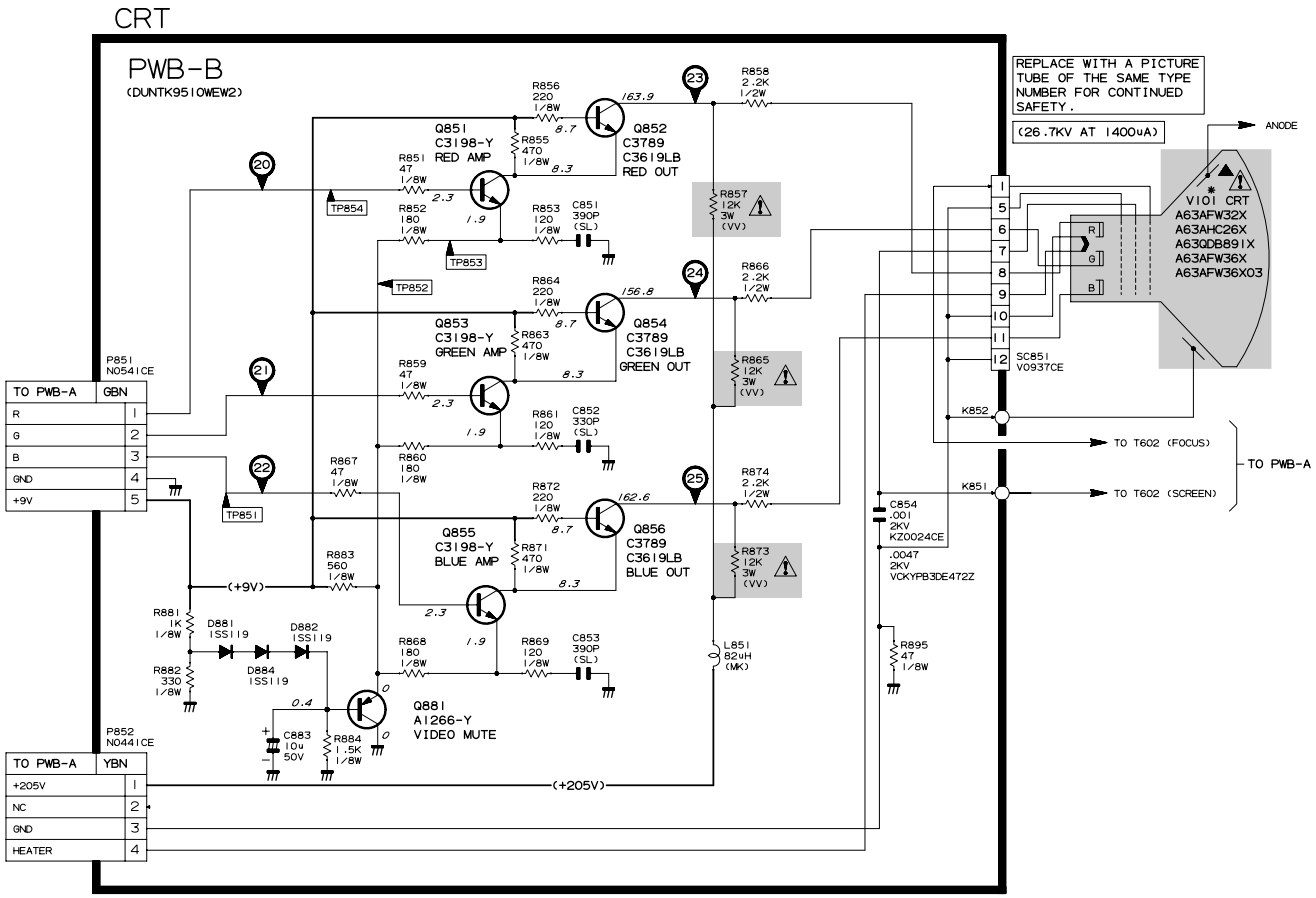
IC3371
AN7511
AUDIO OUT (L)
VCC + POWER GND -
MUTE GND IN POWER

IC351
AN7511
AUDIO OUT(R)
VCC + POW GND -
MUTE GND IN POW

IC3001
CXA2074Q
MTS DECODER
EXT IN 1
EXT IN 2
LP OUT
LP IN
BASS
BASS
TRE R
L R NC VCA WGT VCATC VCA IN VE OUT NC VETC VE WGT VE IN
IN 1 SAP
NOISETC
ST IN
SUBOUT
NC
VCC
SAPTC
GND
IREF
VRG
MTS IN
LSOUT
L R L SDA SCL DGND NC
MAIN
IN OUT NC
PCINT PLINT 2

R3013 100 1/8W
R3012 100
R 3011 1 00
R3014 100 1/8W
R 3010 3.9K
C3017 10v K 16V + (ACA)
C30 18 1u + 50V
C3016 4.7u 50V
C 3015 3.3u K 50V (ACA)
R300 8 3K
C301 4 0.047u
R3007 3.3K
C3013 2700P
C3012 4.7u 50V
C3011 4.7u 50V
C3010 4.7u 50V
C3008 0.01u Z
C3009 220u 16V
C3007 4.7u 50V
R3005 62K
C3006 10u 50V
C3005 4.7u 50V
C3004 1u 50V
R3006 220 1/8W
R3002 220 1/8W
C3001 4.7u 50V
R3003 1M
C3002 560P
C3003 0.012u
R3004 100K
C3375 2.2u 50V
C3374 2.2u 50V
R3501 75
R3502 100K
R3503 100K
C3501 10u 50V
R3504 100
C3502 4.7u 50V
R3507 1K
R3508 1K
C3503 4.7u 50V
C361 220u 16V
R359 0
R3373 0
R3375 0
R3374 10K
C3376 3300P
R3377 8.2K 1/8W
R355 0
C358 10u 50V
C356 3300P
R354 10K
R357 8.2K
C357 10u 50V
R3378 22K 1/8W
R3379 68K
341 3001CEFW
326 3001CEFW
231 2001CEFW

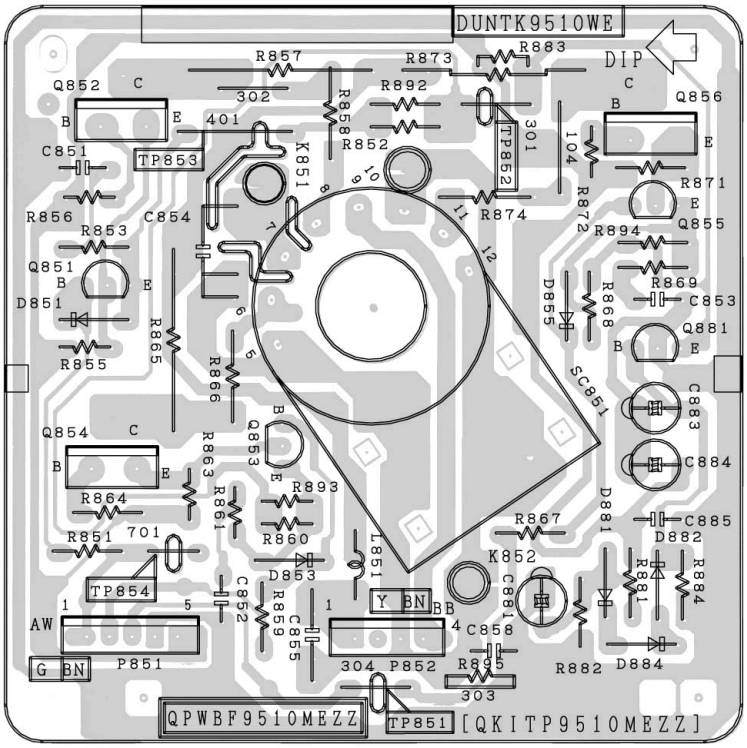
SCHEMATIC DIAGRAM: CRT Unit



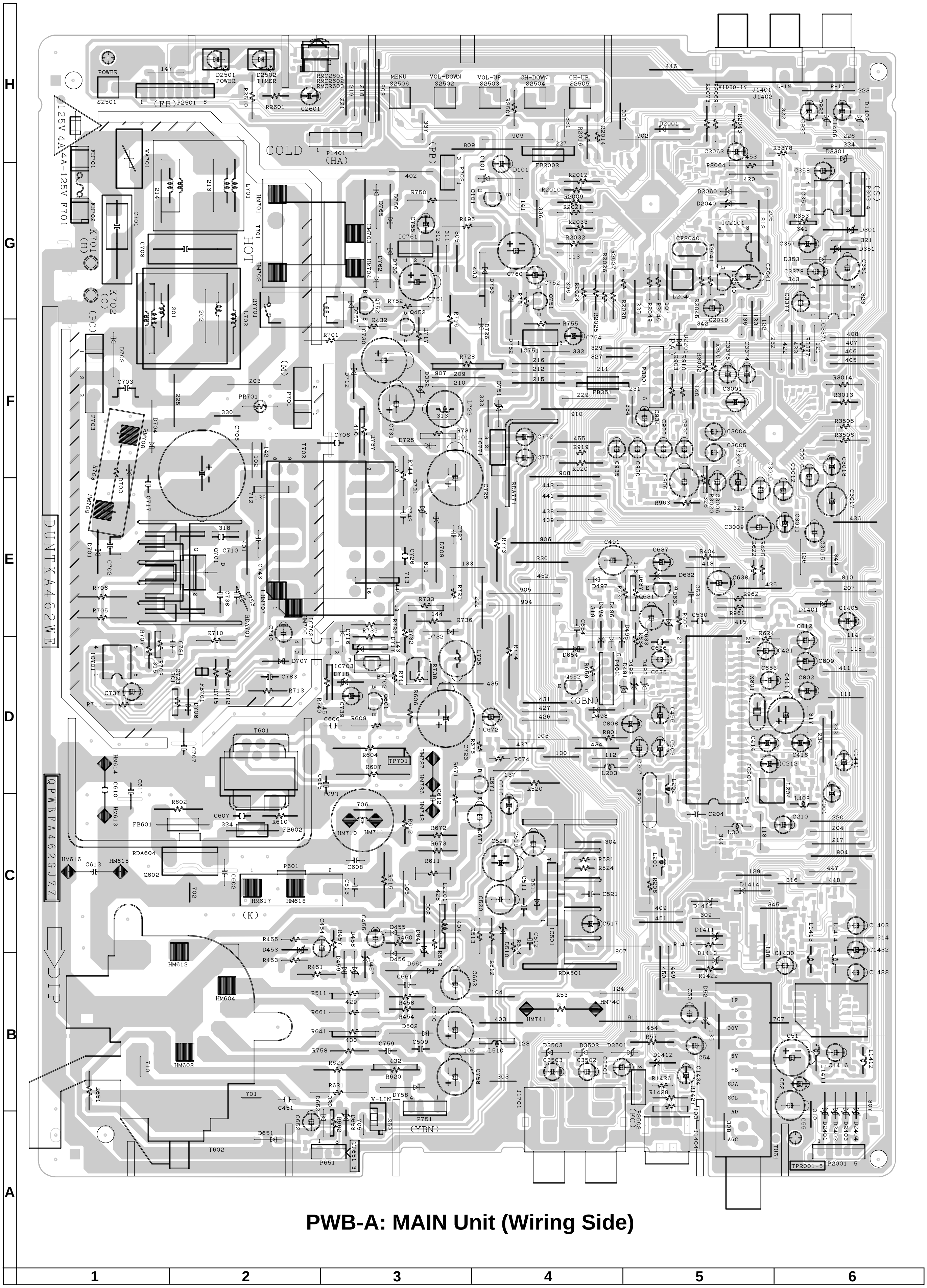
* NOTE

	CRT	DY	R626	R621
COMBI-NATION	A63AFW36X A63AFW32X	CILHOI12GJ CILHOI09GJ	2.7/1W	-
	A63AHC26X	CILHOI10GJ	-	1.2/2W
	A63QDB891X	CILHOI11GJ	2.7/1W	-
	A63AFW36X03	ITC	2.7/1W	-

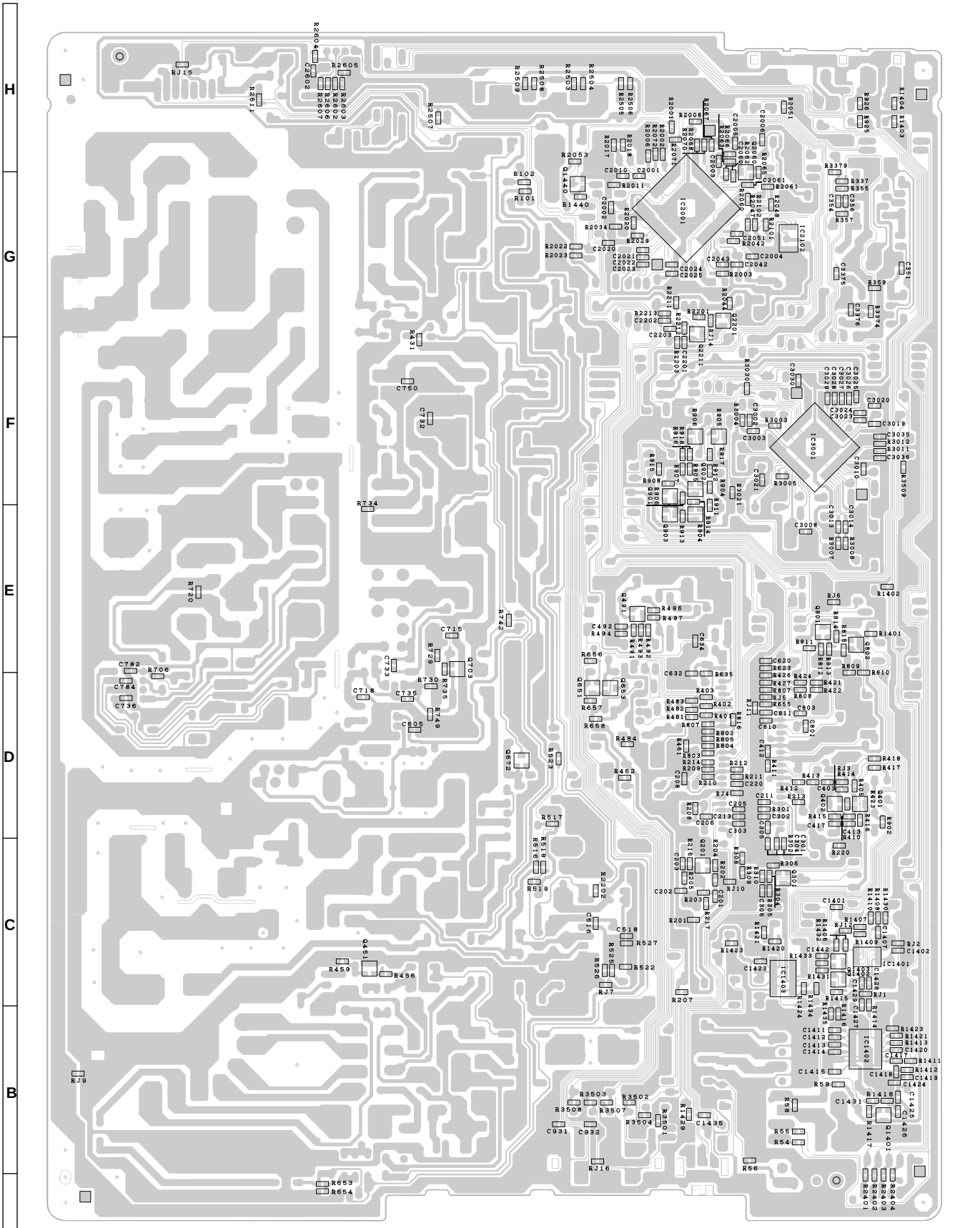
PRINTED WIRING BOARD ASSEMBLIES



PWB-B: CRT Unit (Wiring Side)


H
G
F
E
D
C
B
A
1
2
3
4
5
6
POWER
S2501
(FB)P2501
D2501 POWER
D2502 TIMER
RMC2601 RMC2602 RMC2603
MENU S2506
VOL-DOWN S2502
VOL-UP S2503
CH-DOWN S2504
CH-UP S2505
VIDEO-IN
J1401 J1402
L-IN
R-IN
125V 4A
4A-125V F701
FH701
FH702
VA701
COLD
HOT
P1401 (HA)
(PB) P7021
K701 (H)
K702 (C)
(PC)
P703
T701
T702
RY701
L701
L702
(M)
P701
PR701
IC761
IC751
IC771
IC701
IC702
IC703
Q701
RDA701
RDA771
T601
FB601
FB602
RDA604
Q602
P601
(K)
HM617
HM618
HM612
HM604
HM602
DIP
DUNTKA462WE
QPWBFA462GJZZ
T602
P651
TP651-3
S501
V-LIN
P751
(YBN)
J1701
P2502 (FC)
J1404
TU51
IF
30V
5V
+B
SDA
SCL
AD
AGC
P2001
TP2001-5
IC201
IC501
RDA501
SF201
P401
(GBN)
X801
P3001
(PA)
IC2101
IC2040
IC351
IC3371
P303 (S)
CF2040
L2040
FB351
FB2002
HM740
HM741
HM710
HM711
TP701

PWB-A: MAIN Unit (Wiring Side)



PWB-A: MAIN Unit (Chip Parts Side)

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual ; electrical components having such features are identified by ⚠ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does no have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

in **USA**: Contact your nearest SHARP Parts Distributor to order. For location of SHARP Parts Distributor, Please call Toll-Free; 1-800-BE-SHARP

★ MARK: SPARE PARTS-DELIVERY SECTION

▲ MARK: X-RAY RELATED PARTS

Ref. No.	Part No.	★	Description	Code

PICTURE TUBE

▲ ⚠ V101	VB63AFW32X/∗S or VB63AHC26X/∗S or VB63QDB891X∗S or VB63AFW36X/∗S or VB63AFW36031E	X	Picture Tube	CC
⚠ DY601	RCiLH0109GJZZ or RCiLH0110GJZZ or RCiLH0111GJZZ or RCiLH0112GJZZ	X	Deflection Yoke	BB
⚠ L703	RCiLG0036MEZZ or RCiLG0038MEZZ	X	Degaussing Coil	AN
	LHLDW1001MEKZ	X	Holder	AE
	LHLDW1007MEKZ	X	Holder, x2	AD
	LHLDW1008MEKZ	X	Holder, x2	AE
	MSPRT0002MEZZ	X	Spring, x2	AF
	PMAGF3046CEZZ	J	Purity Magnet	AF
	QEARC2508MEZZ	X	Grounding Strap	AG

	CRT	DY	R626	R621
COMBI-NATION	A63AFW36X A63AFW32X	CILHO112GJ CILHO109GJ	2.7/1W	-
	A63AHC26X	CILHO110GJ	-	1.2/2W
	A63QDB891X	CILHO111GJ	2.7/1W	-
	A63AFW36X03	ITC	2.7/1W	-

PRINTED WIRING BOARD ASSEMBLIES
(NOT REPLACEMENT ITEM)

PWB-A	DUNTKA462WEV4	–	MAIN Unit	—
PWB-B	DUNTK9510WEW2	–	CRT Unit	—

LISTE DES PIECES

CHANGE DES PIECES

Les pi`eces de rechange qui pr élelesentent ces caract éleristiques sp éleciales de s élecurit éle, sont identifi élees dans ce manuel : les pi`eces élelectriques qui pr élesentent ces particularit éles, sont rep éler élee par la marque ⚠ et sont hachur élees dans les listes de pi`eces et dans les diagrammes sch élematiques.
La substitution d'une pi`ece de rechange par une autre qui ne pr éLesente pas les m éoemes caract éLeristiques de s élecurit éle que la pi`ece recommand élee parl'usine et dans ce manuel de service, peut provoquer une éLelectrocution, un incendie ou toutautre sinistre.

"COMMENT COMMANDER LES PIECES DE RECHANGE"

Pour que votre commande soit rapidement et correctement remplie, veuillez fournir les renseignements suivants.

1. NUMERO DU MODELE
2. NO. DE REF
3. NO. DE PIECE
4. DESCRIPTION

in **CANADA**: Contact SHARP Electronics of Canada Limited Phone (416) 890-2100

★ MARQUE: SECTION LIVRAISON DES PIECES DERECHANGE

▲ MARQUE: PIECES RELATIVE AUX RAYONS X

Ref. No.	Part No.	★	Description	Code

PWB-A: DUNTKA462WEV4
MAIN UNIT

TUNER

NOTE: THE PARTS HERES SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

⚠ TU51	VTUVTST5UF740 or VTUENV560A1G3	X	Tuner	AX

	TU51	R57
COMBI-NATION	ENV56DA1G3	56K / 1/8W
	VTST5UF740	56K / 1/8W

INTEGRATED CIRCUITS

▲ ⚠ IC201	RH-iX3354CEN1	J	LA76843N	AT
IC351	VHiAN7511//-1	J	AN7511	AK
⚠ IC501	VHiLA7840//-1	J	LA7840	AR
⚠ IC701	VHiTEA1507/-1	J	TEA1507P/N1	AL
⚠ IC702	RH-FX0034CEZZ or RH-FX0002GEZZ or RH-FX0029CEZZ	J	PC817	AE
⚠ IC703	VHiSE125N//-1	X	SE125N	AK
⚠ IC751	VHiKA7809AP-1	J	KA7809API	AE
⚠ IC771	VHiKA7805AP-1 or VHiTA7805S/-1	J	KA7805API	AE
IC1401	VHiMM1111XF1E	J	MM1111XFBE	AE
IC2001	RH-iX3528CEZZQ	X	TMPA8700CPF-3B	AT
IC2040	VHiPST994C/-1	J	PST994C	AD
IC2102	VHiBR2416E2-1 or VHiSLA24C16-1	J	BR24C16F	AK
IC3001	VHiCXA2074Q-1	J	CXA2074Q	AY
IC3371	VHiAN7511//-1	J	AN7511	AK

TRANSISTORS

Q101	VS2SC3198-Y-1 or VS2SC945AQ/-1	J	C3198-Y	AA

PWB-A: DUNTKA462WEV4
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
Q201	VS2SC2735//1E	J	C2735	AC
Q301	VS2SD601AR/-1 or VS2SC3928R/-1	J	D601AR	AC
Q451	VS2SB709AR/-1	J	B709AR	AC
Q452	VS2SA1266-Y-1	J	A1266-Y	AA
Q491	VS2SB709AR/-1	J	B709AR	AC
Q601	VS2SC2482//-1	J	C2482	AD
⚠ Q602	VS2SD2539//1E or VS2SD2634++-G	J	D2539	AP
Q631	VS2SC3198-Y-1 or VS2SC945AQ/-1	J	C3198-Y	AA
Q651	VS2SB709AR/-1	J	B709AR	AC
Q652	VS2SA1266-Y-1	J	A1266-Y	AA
Q653	VS2SD601AR/-1 or VS2SC3928R/-1	J	D601AR	AC
⚠ Q701	VS2SK2708++1G	X	K2708++	AR
Q704	VS2SD601AR/-1 or VS2SC3928R/-1	J	D601AR	AC
Q705	VS2SC3198-Y-1 or VS2S945AQ/-1	J	C3198-Y	AA
Q752	VS2SC3198-Y-1 or VS2SC945AQ/-1	J	C3198-Y	AA
Q2201	VS2SD601AR/-1 or VS2SC3928R/-1	J	D601AR	AC
Q2211	VS2SD601AR/-1 or VS2SC3928R/-1	J	D601AR	AC

DIODES

D52	RH-EX0676GEZZ	J	Zener Diode, 32V	AA
D101	RH-EX0616GEZZ	J	Zener Diode, 5.6V	AA
D453	RH-EX0616GEZZ	J	Zener Diode, 5.1V	AA
D455	VHD1SS119//-1 or RH-DX0475CEZZ	J	Diode	AB
D494	VHD1SS119//-1 or RH-DX0475CEZZ	J	Diode	AB
D495	VHD1SS119//-1 or RH-DX0475CEZZ	J	Diode	AB
D496	VHD1SS119//-1 or RH-DX0475CEZZ	J	Diode	AB
D497	VHD1SS119//-1 or RH-DX0475CEZZ	J	Diode	AB
⚠ D502	RH-DX0131CEZZ	J	Diode	AC
D511	RH-DX0441CEZZ	J	Diode	AC
D632	RH-EX0630GEZZ	J	Zener Diode, 9.1V	AA
D641	RH-EX0630GEZZ	J	Zener Diode, 9.1V	AA
▲⚠ D651	VHD1SS244//-1	J	Diode	AB
▲⚠ D653	RH-EX0666GEZZ	J	Zener Diode, 27V	AB
D654	VHD1SS119//-1 or RH-DX0475CEZZ	J	Diode	AB
⚠ D661	RH-DX0468CEZZ or RH-DX0229CEZZ	J	Diode	AE
⚠ D701	RH-DX0154CEZZ or RH-DX0490CEZZ or RH-DX0279CEZZ	J	Diode	AC
⚠ D702	RH-DX0154CEZZ or RH-DX0490CEZZ or RH-DX0279CEZZ	J	Diode	AC
⚠ D703	RH-DX0154CEZZ or RH-DX0490CEZZ or RH-DX0279CEZZ	J	Diode	AC
⚠ D704	RH-DX0154CEZZ or RH-DX0490CEZZ or RH-DX0279CEZZ	J	Diode	AC
D707	VHD1SS119//-1 or VHD1SS244//-1	J	Diode	AB
D708	VHD1SS119//-1 or VHD1SS244//-1	J	Diode	AB
⚠ D709	RH-DX0229CEZZ	J	Diode	AF
⚠ D712	RH-DX0532CEZZ or VHDDINS4///-1 or RH-DX0302CEZZ or RH-DX0468CEZZ or RH-DX0513CEZZ or RH-DX0487CEZZ or RH-DX0488CEZZ	X	Diode	AF
⚠ D725	RH-DX0131CEZZ or RH-DX0468CEZZ	J	Diode	AC
D726	VHD1SS119//-1 or RH-DX0475CEZZ	J	Diode	AB
D753	RH-DX0441CEZZ or RH-DX0110CEZZ	J	Diode	AC
⚠ D758	RH-DX0131CEZZ	J	Diode	AC
D2201	VHD1SS119//-1 or RH-DX0475CEZZ	J	Diode	AB
⚠ VA701	RH-VX0048CEZZ or RH-VX0035CEZZ or RH-VX0019CEZZ or RH-VX0074CEZZ	J	Varistor	AE

PACKAGED CIRCUITS

⚠ PR701	RMPTP0092CEZZ	J	Packaged Circuit	AH
X801	RCRSB0001PEZZ or RCRSB0205CEZZ	R	Crystal	AL

FILTERS AND COILS

CF2040	RFiLA0099CEZZ	J	Ceramic Filter	AE
L201	VP-XF1R2K0000	J	Peaking 1.2µH	AB
L203	VP-XF220K0000	J	Peaking 22µH	AB
L204	RCiLi0632CEZZ	J	IF Coil	AE
L301	VP-XF150K0000	J	Peaking 15µH	AB
⚠ L701	RCiLF0078PEZZ or RCiLF0025PEZZ	R	Coil	AF
L702	RCiLF0078PEZZ or RCiLF0090PEZZ or RCiLF0025PEZZ	R	Coil	AF

PWB-A: DUNTKA462WEV4
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
L705	RCiLP0179CEZZ	J	Coil	AD
L2040	RCiLB0131CEZZ	J	Oscillation Coil	AE
SF201	RFiLC0405CEZZ	J	SAW Filter	AH

TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
⚠ T601	RTRNZ0057PEZZ or RTRNZ0731CEZZ	R	Transformer	AK
▲⚠ T602	RTRNF0049MEZZ	X	H-Volt Transformer	AY
⚠ T702	RTRNW0001GJZZ	X	Transformer	AN

CAPACITORS

[EL. ··· Electrolytic, M-Poly.··· Metalized Polypro Film]

Ref. No.	Part No.	★				Code
C51	VCEA0A1AW108M	J	1000	10V	EL.	AC
C53	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C54	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C101	VCEA0A1CW476M	J	47	16V	EL.	AB
C201	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C202	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C203	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C204	VCQYTA1HM223K	J	0.022	50V	Mylar	AB
C205	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C206	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C207	VCEA0A1CW476M	J	47	16V	EL.	AB
C208	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C209	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C210	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C212	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C220	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C301	VCCCCY1HH220J	J	22p	50V	Ceramic	AA
C302	VCKYCY1HB102K	J	1000p	50V	Ceramic	AA
C303	VCCCCY1HH331J	J	330p	50V	Ceramic	AA
C304	VCCCCY1HH220J	J	22p	50V	Ceramic	AA
C305	VCKYCY1HB103K	J	0.01	50V	Ceramic	AA
C356	VCKYCY1HB332K	J	3300p	50V	Ceramic	AA
C357	VCEA0A1HW106M	J	10	50V	EL.	AB
C358	VCEA0A1HW106M	J	10	50V	EL.	AB
C361	VCEA0A1CW227M	J	220	16V	EL.	AC
C411	VCEA0A1AW108M	J	1000	10V	EL.	AC
C412	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C414	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C416	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C451	VCQYTA1HM104K	J	0.1	50V	Mylar	AC
C454	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C456	VCEA0A1HW106M	J	10	50V	EL.	AB
C491	VCEA0A1CW107M	J	100	16V	EL.	AC
C492	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C510	VCEA0A1VW477M	J	470	35V	EL.	AB
C511	VCCSPA2HL180K	J	18p	500V	Ceramic	AA
C512	VCFYSA1JB224J	X	0.22	63V	Mylar	AF
C513	VCFYSA1JB473J	J	0.047	63V	Mylar	AC
C514	VCEA0A1VW477M	J	470	35V	EL.	AB
C515	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C516	VCKYCY1HB222K	J	2200p	50V	Ceramic	AA
C517	VCEA0A1CW226M	J	22	16V	EL.	AB
C520	VCEA0A1HW107M	J	100	50V	EL.	AB
C530	VCFYFA1HA334J	J	0.3L	5cÜ	Mylar	AB
C531	VCFYFA1HA564J	J	0.56	50V	Mylar	AB
C606	VCKYPA2HB561K	J	560p	500V	Ceramic	AA
C607	VCKYPA1HB472K	J	4700p	50V	Ceramic	AA
⚠ C610	RC-FZ1033CEZZ	X	12600p	1.8kV	Mylar	AF
C612	VCFPVC2DB514J	X	0.51	200V	M-Poly.	AF
C632	VCKYCY1EB153K	J	0.015	25V	Ceramic	AA
C633	VCEA0A1AW337M	X	330	10V	EL.	AE
C634	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C635	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C637	VCEA0A1CW476M	J	47	16V	EL.	AB
C652	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C653	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C654	VCFYSA1HB184J	J	0.18	50V	Mylar	AB
C662	VCEA0A1CW477M	J	470	16V	EL.	AC

Ref. No.	Part No.	★				Code
⚠ C701	RC-FZ037SCEZZ or RC-FZ0125GEZZ or RC-FZ0175GEZZ or RC-FZ0295GEZZ	J	0.22	AC250V	Plastic	AD
C702	RC-KZ0029CEZZ or RC-KZ0016CEZZ	J	0.01	AC250V	Ceramic	AC
C703	RC-KZ0029CEZZ or RC-KZ0016CEZZ	J	0.01	AC250V	Ceramic	AC
⚠ C705	RC-EZ1336CEZZ or RC-EZ0800CEZZ	X	560	200V	EL.	AN
⚠ C706	RC-KZ0092GEZZ or RC-KZ021SCEZZ or RC-KZ009SCEZZ or RC-KZ0106GEZZ	J	0.0033	AC250V	Ceramic	AC
C717	VCKYPA2HB472K	J	4700p	500V	Ceramic	AB
C723	RC-EZ0724CEZZ	J	100	160V	EL.	AG
⚠ C725	RC-EZ0809CEZZ	J	220	160V	EL.	AL
C726	VCKYPH3DB561K or RC-KZ0338CE	J	560p	2kV	Ceramic	AC
C727	VCKYPA2HB472K	J	4700p	500V	Ceramic	AB
⚠ C730	VCEA0A1CW108M	J	1000	16V	EL.	AD
⚠ C731	VCEA0A1EW337M	J	330	25V	EL.	AC
C732	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C736	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C737	VCEA0A1EW226M	J	22	25V	EL.	AB
C738	RC-KZ0040CEZZ or RC-KZ0340CEZZ	J	820p	2kV	Ceramic	AD
C739	VCEA0A1HW104M	J	0.1	50V	EL.	AB
C740	VCEA0A1EW476M	J	47	25V	EL.	AB
C742	VCKYPA2HB102K	J	1000p	500V	Ceramic	AA
C743	VCKYPH3DB561K or RC-KZ0338CE	J	560p	2kV	Ceramic	AC
C750	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C752	VCEA0A1CW476M	J	47	16V	EL.	AB
C753	VCKYPH3DB561K or RC-KZ0338CE	J	560p	2kV	Ceramic	AC
C754	VCEA0A1CW476M	J	47	16V	EL.	AB
C758	VCEA0A2EW106M	J	10	250V	EL.	AD
C760	VCEA0A1CW108M	J	1000	16V	EL.	AD
C771	VCEA0A1CW476M	J	47	16V	EL.	AB
C772	VCEA0A1CW476M	J	47	16V	EL.	AB
C783	VCQYTA1HM103K	J	0.01	50V	Mylar	AB
C784	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C801	VCCCCY1HH180J	J	18p	50V	Ceramic	AA
C807	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C808	VCEA0A1HW106M	J	10	50V	EL.	AB
C809	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C811	VCKYCY1CB473K	J	0.047	16V	Ceramic	AA
C812	VCEA0A1HW474M	J	0.47	50V	EL.	AB
C901	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C925	VCEA0A1HW106M	J	10	50V	EL.	AB
C1401	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C1402	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C1403	VCEA0A1CW476M	J	47	16V	EL.	AB
C1405	VCEA0A1HW106M	J	10	50V	EL.	AB
C1406	VCEA0A1HW106M	J	10	50V	EL.	AB
C2001	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C2002	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C2003	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2004	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2006	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C2040	VCEA0A1AW107M	J	100	10V	EL.	AB

PWB-A: DUNTKA462WEV4

MAIN UNIT (Continued)

Ref. No.	Part No.	★			Description	Code
C2041	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C2060	VCKYCY1EF104Z	J	0.1	25V	Ceramic	AA
C2061	VCKYCY1HB222K	J	2200p	50V	Ceramic	AA
C2062	VCEA0A1AW107M	J	100	10V	EL.	AB
C2201	VCKYCY1HB682K	J	6800p	50V	Ceramic	AA
C2202	VCCCCY1HH151J	J	150p	50V	Ceramic	AA
C2203	VCCCCY1HH331J	J	330p	50V	Ceramic	AA
C2601	VCEA0A1CW476M	J	47	16V	EL.	AB
C2602	VCCCCY1HH101J	J	100p	50V	Ceramic	AA
C3001	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3002	VCKYCY1HB562K	J	5600p	50V	Ceramic	AA
C3003	VCKYCY1EB123K	J	0.012	25V	Ceramic	AA
C3004	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C3005	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3006	VCEA0A1HW106M	J	10	50V	EL.	AB
C3007	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3008	VCKYCY1HF103Z	J	0.01	50V	Ceramic	AA
C3009	VCEA0A1CW227M	J	220	16V	EL.	AC
C3010	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3011	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3012	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3013	VCKYCY1HB272K	J	2700p	50V	Ceramic	AA
C3014	VCKYCY1CB473K	J	0.047	16V	Ceramic	AA
C3015	VCEACA1HC335K	X	3.3	50V	EL.	AF
C3016	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3017	VCEACA1CC106K	J	10	16V	EL.	AC
C3018	VCEA0A1HW105M	J	1.0	50V	EL.	AB
C3374	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C3375	VCEA0A1HW225M	J	2.2	50V	EL.	AB
C3376	VCKYCY1HB332K	J	3300p	50V	Ceramic	AA
C3501	VCEA0A1HW106M	J	10	50V	EL.	AB
C3502	VCEA0A1HW475M	J	4.7	50V	EL.	AB
C3503	VCEA0A1HW475M	J	4.7	50V	EL.	AB

RESISTORS

[M-Ox.···Metal Oxide, M-Film···Metal Film]

RJ1	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ2	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ3	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ4	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ5	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ6	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ10	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ11	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ14	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ15	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ16	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
RJ17	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R53	VRS-RG3LB223J+	X	22k	3W	M-Ox.	AF
R54	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R55	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R56	VRS-CY1JF823J	J	82k	1/16W	M-Ox.	AA
R57	VRD-RA2BE563J	J	56k	1/8W	Carbon	AA
R58	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R59	VRS-CY1JF1R0J	J	1.0	1/16W	M-Ox.	AA
R101	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R102	VRS-CY1JF100J	J	10	1/16W	M-Ox.	AA
R201	VRS-CY1JF151J	J	150	1/16W	M-Ox.	AA
R202	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R203	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R204	VRS-CY1JF270J	J	27	1/16W	M-Ox.	AA
R205	VRS-CY1JF331J	J	330	1/16W	M-Ox.	AA
R206	VRD-RA2EE151J	J	150	1/4W	Carbon	AA
R207	VRS-CY1JF273J	J	27k	1/16W	M-Ox.	AA
R209	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R210	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R211	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R212	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R220	VRS-CY1JF331J	J	330	1/16W	M-Ox.	AA
R301	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R302	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R304	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R305	VRS-CY1JF152J	J	1.5k	1/16W	M-Ox.	AA
R306	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R308	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R354	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R355	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R357	VRS-CY1JF822J	J	8.2k	1/16W	M-Ox.	AA
R359	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R401	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R402	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R403	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R404	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R405	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R411	VRS-CY1JF684J	J	680k	1/16W	M-Ox.	AA
R412	VRS-CY1JF391J	J	390	1/16W	M-Ox.	AA
R413	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R414	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R426	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R427	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R431	VRS-CY1JF272J	J	2.7k	1/16W	M-Ox.	AA
R432	VRD-RA2BE472J	J	4.7k	1/8W	Carbon	AA
⚠ R451	VRS-RG2HC103J	J	10k	1/2W	M-Ox.	AA
R453	VRD-RA2BE152J	J	1.5k	1/8W	Carbon	AA
R454	VRD-RM2HD184J	J	180k	1/2W	Carbon	AA
R455	VRD-RA2BE392J	J	3.9k	1/8W	Carbon	AA
R456	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R457	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R458	VRD-RA2EE564J	J	560k	1/4W	Carbon	AA
R461	VRS-CY1JF274J	J	270k	1/16W	M-Ox.	AA
R462	VRS-CY1JF563J	J	56k	1/16W	M-Ox.	AA
R491	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R492	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R493	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R494	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R496	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R497	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R512	VRD-RM2HD102J	J	1.0k	1/2W	Carbon	AA
R513	VRD-RM2HD102J	J	1.0k	1/2W	Carbon	AA
R514	VRD-RM2HD1R0J	J	1.0	1/2W	Carbon	AA
R515	VRS-RG3DB271J+	X	270	2W	M-Ox.	AE
R516	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R517	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R518	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R519	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R520	VRN-RL3AB1R0J+	X	1.0	1W	M-Film	AE
R522	VRS-CY1JF122J	J	1.2k	1/16W	M-Ox.	AA
R523	VRS-CY1JF392J	J	3.9k	1/16W	M-Ox.	AA
R525	VRS-CY1JF272J	J	2.7k	1/16W	M-Ox.	AA
R527	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
⚠ R604	VRS-RG3LB472J+	X	4.7k	3W	M-Ox.	AF
R605	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R606	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
⚠ R607	VRS-RG3LB472J+	X	4.7k	3W	M-Ox.	AF
⚠ R609	VRS-RG3AB562J+	X	5.6k	1W	M-Ox.	AE
R610	VRD-RM2HD220J	J	22	1/2W	Carbon	AA
⚠ R611	VRS-KA3NG3R3K	J	3.3	7W	M-Ox.	AD
⚠ R620	VRN-RL3ABR33J+	X	0.33	1W	M-Film	AE
R622	VRD-RA2BE222J	J	2.2k	1/8W	Carbon	AA
R623	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R624	VRN-RA2BK472F	J	4.7k	1/8W	M-Film	AA
⚠ R626	VRN-RL3AB2R7J+	X	2.7	1W	M-Film	AE
R634	VRD-RM2HD121J	J	120	1/2W	Carbon	AA
R635	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R636	VRD-RA2EE221J	J	220	1/4W	Carbon	AA
⚠ R641	VRS-RG3AB682J+	X	6.8k	1W	M-Ox.	AE
▲⚠ R651	VRS-RG2HC270J+	X	27	1/2W	M-Ox.	AE
▲⚠ R653	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
▲⚠ R654	VRS-CY1JF154J	J	150k	1/16W	M-Ox.	AA
▲⚠ R655	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R656	VRS-CY1JF273J	J	27k	1/16W	M-Ox.	AA
R657	VRS-CY1JF273J	J	27k	1/16W	M-Ox.	AA
R658	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R659	VRD-RA2BE332J	J	3.3k	1/8W	Carbon	AA
⚠ R661	VRN-RL3ABR47J+	X	0.47	1W	M-Film	AE

PWB-A: DUNTKA462WEV4

MAIN UNIT (Continued)

Ref. No.	Part No.	★			Description	Code
⚠ R701	RR-DZ0049CEZZ	J	3.9M	1/2W	Solid	AB
	or					
	RR-HZ0048CEZZ					
⚠ R703	VRW-KQ3NC1R2K	J	1.2	7W	Cement	AE
R705	VRN-RL3ABR33J+	X	0.33	1W	M-Film	AE
R706	VRN-RL3ABR22J+	X	0.22	1W	M-Film	AE
R707	VRD-RM2HD270J	J	27	1/2W	Carbon	AA
R708	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R710	VRS-RG2HC103J	J	10k	1/2W	M-Ox.	AA
R711	VRD-RA2BE334J	J	330k	1/8W	Carbon	AA
R712	VRD-RA2BE100J	J	10	1/8W	Carbon	AA
R713	VRS-RG2HC122J+	X	1.2k	1/2W	M-Ox.	AE
R715	VRD-RA2BE150J	J	15	1/8W	Carbon	AA
R716	VRS-RG3AB121J+	X	120	1W	M-Ox.	AE
R730	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R731	VRS-RG2HC821J+	X	820	1/2W	M-Ox.	AE
R733	VRS-SV2HC332J	J	3.3k	1/2W	M-Ox.	AA
R736	VRS-SV2HC222J	J	2.2k	1/2W	M-Ox.	AA
⚠ R737	VRN-RL3ABR39J	X	0.39	1W	M-Film	AE
	or					
	VRV-RL3DBR39J	X	0.39	2W	M-Film	AE
R740	VRD-RM2HD470J	J	47	1/2W	Carbon	AA
R742	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
⚠ R744	VRN-RL2HCR68J+	X	0.68	1/2W	M-Film	AE
R745	VRD-RA2BE393J	J	39k	1/8W	Carbon	AA
R746	VRS-CY1JF562J	J	5.6k	1/16W	M-Ox.	AA
R747	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R752	VRD-RA2BE562J	J	5.6k	1/8W	Carbon	AA
⚠ R758	VRS-RG2HC100J+	X	10	1/2W	M-Ox.	AE
⚠ R773	VRS-RG3LB270J+	X	27	3W	M-Ox.	AF
⚠ R774	VRS-RG3LB680J+	X	68	3W	M-Ox.	AF
R801	VRD-RM2HD470J	J	47	1/2W	Carbon	AA
R807	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R808	VRS-CY1JF272J	J	2.7k	1/16W	M-Ox.	AA
R809	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R810	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R816	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R925	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R926	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R961	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R962	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R1401	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R1402	VRS-CY1JF750J	J	75	1/16W	M-Ox.	AA
R1403	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R1404	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R1410	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R2001	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R2002	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2006	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2008	VRS-CY1JF472J	J	4.7k	1/16W	M-Ox.	AA
R2009	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R2010	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R2011	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2016	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R2018	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2020	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R2022	VRS-CY1JF333J	J	33k	1/16W	M-Ox.	AA
R2023	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R2024	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R2025	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R2026	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R2027	VRD-RA2BE682J	J	6.8k	1/8W	Carbon	AA
R2028	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R2029	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2032	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R2033	VRD-RA2BE684J	J	680k	1/8W	Carbon	AA
R2034	VRS-CY1JF684J	J	680k	1/16W	M-Ox.	AA
R2040	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R2041	VRD-RA2BE333J	J	33k	1/8W	Carbon	AA
R2042	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2043	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R2044	VRS-CY1JF683J	J	68k	1/16W	M-Ox.	AA
R2045	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R2047	VRS-CY1JF221J	J	220	1/16W	M-Ox.	AA
R2048	VRS-CY1JF562J	J	5.6k	1/16W	M-Ox.	AA
R2049	VRD-RA2BE333J	J	33k	1/8W	Carbon	AA
R2060	VRS-CY1JF221J	J	220	1/16W	M-Ox.	AA
R2061	VRS-CY1JF562J	J	5.6k	1/16W	M-Ox.	AA
R2062	VRS-CY1JF183J	J	18k	1/16W	M-Ox.	AA
R2063	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R2064	VRD-RA2BE391J	J	390	1/8W	Carbon	AA
R2065	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R2067	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2068	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2069	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R2070	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2072	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2101	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2102	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2201	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R2202	VRS-CY1JF473J	J	47k	1/16W	M-Ox.	AA
R2203	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R2211	VRS-CY1JF222J	J	2.2k	1/16W	M-Ox.	AA
R2212	VRS-CY1JF682J	J	6.8k	1/16W	M-Ox.	AA
R2213	VRS-CY1JF223J	J	22k	1/16W	M-Ox.	AA
R2401	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2402	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2403	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2404	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R2501	VRD-RA2BE123J	J	12k	1/8W	Carbon	AA
R2503	VRS-CY1JF273J	J	27k	1/16W	M-Ox.	AA
R2504	VRS-CY1JF123J	J	12k	1/16W	M-Ox.	AA
R2505	VRS-CY1JF563J	J	56k	1/16W	M-Ox.	AA
R2506	VRS-CY1JF563J	J	56k	1/16W	M-Ox.	AA
R2507	VRS-CY1JF823J	J	82k	1/16W	M-Ox.	AA
R2508	VRS-CY1JF153J	J	15k	1/16W	M-Ox.	AA
R2509	VRS-CY1JF272J	J	2.7k	1/16W	M-Ox.	AA
R2601	VRD-RA2BE100J	J	10	1/8W	Carbon	AA
R2602	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R2604	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R2605	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R3001	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R3002	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
R3003	VRS-CY1JF105J	J	1.0M	1/16W	M-Ox.	AA
R3004	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R3005	VRS-CY1JF623J	J	62k	1/16W	M-Ox.	AA
R3007	VRS-CY1JF332J	J	3.3k	1/16W	M-Ox.	AA
R3008	VRS-CY1JF302J	J	3.0k	1/16W	M-Ox.	AA
R3010	VRS-CY1JF392J	J	3.9k	1/16W	M-Ox.	AA
R3011	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R3012	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R3013	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R3014	VRD-RA2BE101J	J	100	1/8W	Carbon	AB
R3373	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R3374	VRS-CY1JF103J	J	10k	1/16W	M-Ox.	AA
R3375	VRS-CY1JF000J	J	0	1/16W	M-Ox.	AA
R3377	VRD-RA2BE822J	J	8.2k	1/8W	Carbon	AA
R3378	VRD-RA2BE223J	J	22k	1/8W	Carbon	AA
R3379	VRS-CY1JF683J	J	68k	1/16W	M-Ox.	AA
R3501	VRS-CY1JF750J	J	75	1/16W	M-Ox.	AA
R3502	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R3503	VRS-CY1JF104J	J	100k	1/16W	M-Ox.	AA
R3504	VRS-CY1JF101J	J	100	1/16W	M-Ox.	AA
R3507	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA
R3508	VRS-CY1JF102J	J	1.0k	1/16W	M-Ox.	AA

SWITCHES

S2501	QSW-K0202PEZZ	R	POWER	AC
	or			
	QSW-K0079GEZZ			
S2502	QSW-K0202PEZZ	R	VOL-DOWN	AC
	or			
	QSW-K0079GEZZ			
S2503	QSW-K0202PEZZ	R	VOL-UP	AC
	or			
	QSW-K0079PEZZ			
S2504	QSW-K0202PEZZ	R	CH-DOWN	AC

Ref. No.	Part No.	★	Description	Code
	or			
	QSW-K0079GEZZ			
S2505	QSW-K0202PEZZ	R	CH-UP	AC
	or			
	QSW-K0079GEZZ			
S2506	QSW-K0202PEZZ	R	MENU	AC
	or			
	QSW-K0079GEZZ			

PWB-A: DUNTKA462WEV4
MAIN UNIT (Continued)

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠ F701	QFS-B4023CEZZ	J	Fuse, 4A-AC125V	AC
	or			
	QFS-B4021GEZZ			
FB601	RBLN-0047CEZZ	J	Ferrite Bead	AB
FB2002	RBLN-0037CEZZ	J	Ferrite Bead	AB
FH701	QFSHD1013CEZZ	J	Fuse Holder	AC
FH702	QFSHD1014CEZZ	J	Fuse Holder	AC
J1401	QJAKG0074CEZZ	J	Jack	AF
	or			
	QJAKG0089CEZZ			
J1701	QTANJ0340CEZZ	X	Terminal	AG
P303	QPLGN0461CEZZ	J	Plug, 4-pin(S)	AB
P401	QPLGN0561CEZZ	J	Plug, 5-pin(GBN)	AB
P601	QPLGN0160FJZZ	J	Plug, 5-pin(K)	AD
P651	QPLGN0361CEZZ	J	Plug, 3-pin	AB
P701	QPLGN0260CEZZ	J	Plug, 2-pin(M)	AC
P751	QPLGN0461CEZZ	J	Plug, 4-pin(YBN)	AB
P2001	QPLGN0561CEZZ	J	Plug, 5-pin	AB
RMC2601	RRMCU0222CEZZ	J	R/C Receiver	AL
RDA501	PRDAR0280PEFW	R	Heat Sink, for IC501	AF
RDA604	PRDAR0233PEFW	R	Heat Sink, for Q602	AK
RDA701	PRDAR0265PEFW	R	Heat Sink, for Q701	AD
	TLABN0101GJZZ	X	Label	AE
	LX-BZ3049GEFD	J	Screw	AA
	LX-BZ3100CEFD	J	Screw	AA
	LX-TZ3004CEFD	J	Screw	AA

PWB-B: DUNTK9510WEW2
CRT UNIT

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q851	VS2SC3198-Y-1	J	C3198-Y	AA
Q852	VS2SC3789//2E	J	C3789	AF
	or			
	VS2SC3619LB/E			
Q853	VS2SC3198-Y-1	J	C3198-Y	AA
Q854	VS2SC3789//2E	J	C3789	AF
	or			
	VS2SC3619LB/E			
Q855	VS2SC3198-Y-1	J	C3198-Y	AA
Q856	VS2SC3789//2E	J	C3789	AF
	or			
	VS2SC3619LB/E			
Q881	VS2SA1266-Y-1	J	A1266-Y	AA

DIODES

Ref. No.	Part No.	★	Description	Code
D881	VHD1SS119//-1	J	Diode	AB
D882	VHD1SS119//-1	J	Diode	AB
D884	VHD1SS119//-1	J	Diode	AB

COIL

Ref. No.	Part No.	★	Description	Code
L851	VP-MK820K0000	J	Peaking 82µH	AB

CAPACITORS

[EL. ···Electrolytic]

Ref. No.	Part No.	★				Code
C851	VCCSPA1HL391J	J	390p	50V	Ceramic	AA
C852	VCCSPA1HL331J	J	330p	50V	Ceramic	AA
C853	VCCSPA1HL391J	J	390p	50V	Ceramic	AA
C854	RC-KZ0024CEZZ	J	0.001	2kV	Ceramic	AC
	or					
	VCKYPB3DE472Z		0.0047	2kV	Ceramic	
C883	VCEA0A1HW106M	J	10	50V	EL.	AB

RESISTORS

[M-Ox.···Metal Oxide]

Ref. No.	Part No.	★				Code
R851	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R852	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R853	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R855	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R856	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
⚠ R857	VRS-VV3LB123J	J	12k	3W	M-Ox.	AB
R858	VRD-RM2HD222J	J	2.2k	1/2W	Carbon	AA
R859	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R860	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R861	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R863	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R864	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
⚠ R865	VRS-VV3LB123J	J	12k	3W	M-Ox.	AB
R866	VRD-RM2HD222J	J	2.2k	1/2W	Carbon	AA
R867	VRD-RA2BE470J	J	47	1/8W	Carbon	AA
R868	VRD-RA2BE181J	J	180	1/8W	Carbon	AA
R869	VRD-RA2BE121J	J	120	1/8W	Carbon	AA
R871	VRD-RA2BE471J	J	470	1/8W	Carbon	AA
R872	VRD-RA2BE221J	J	220	1/8W	Carbon	AA
⚠ R873	VRS-VV3LB123J	J	12k	3W	M-Ox.	AB
R874	VRD-RM2HD222J	J	2.2k	1/2W	Carbon	AA
R881	VRD-RA2BE102J	J	1.0k	1/8W	Carbon	AA
R882	VRD-RA2BE331J	J	330	1/8W	Carbon	AA
R883	VRD-RA2BE561J	J	560	1/8W	Carbon	AA
R884	VRD-RA2BE152J	J	1.5k	1/8W	Carbon	AA
R895	VRD-RA2BE470J	J	47	1/8W	Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P851	QPLGN0541CEZZ	J	Plug, 5-pin(GBN)	AB
P852	QPLGN0441CEZZ	J	Plug, 4-pin(YBN)	AB
SC851	QSOCV0937CEZZ	J	CRT Socket	AL

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠ ACC701	QACCD3064CESA	J	AC Cord	AM
	VSP0080PBQ4YA	X	Speaker, (L) (R)	AK
	QCNW-0134MEZZ	X	Connecting Cord(SP)	AF
	QCNW-0166MEZZ	X	Connecting Cord(GBN)	AE
	QCNW-0167MEZZ	J	Connecting Cord(YBN)	AE

CABINET PARTS

Ref. No.	Part No.	★	Description	Code
1	CCABA0120WEH2	X	Front Cabinet Ass'y	BC
1-1	*Not Available*	–	Front Cabinet	—
1-2	GCOVA0109GJKA	X	LED-R/C Cover	AF
1-3	HBDGB1008MESB	X	Badge, "SHARP"	AG
1-4	JBTN-0109GJKA	X	Button, Power	AE
1-5	JBTN-0110GJKA	X	Button, Vol-up/down, Ch-up/down	AE
2	GCABB0114GJKA	X	Rear Cabinet	AZ

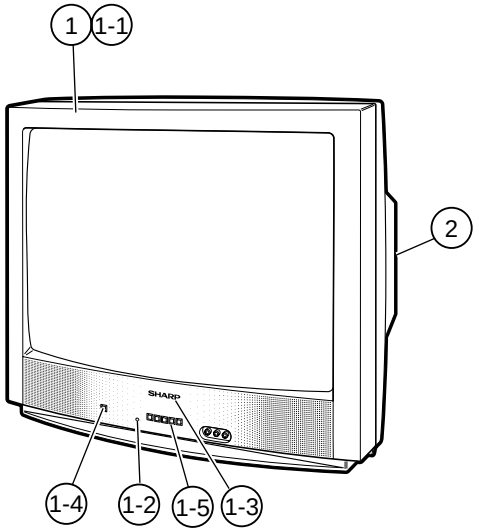
SUPPLIED ACCESSORIES

	TiNS-7299GJZZ	X	Operation Manual	AL
	RRMCG1626CESA	X	Infrared R/C Unit	AV

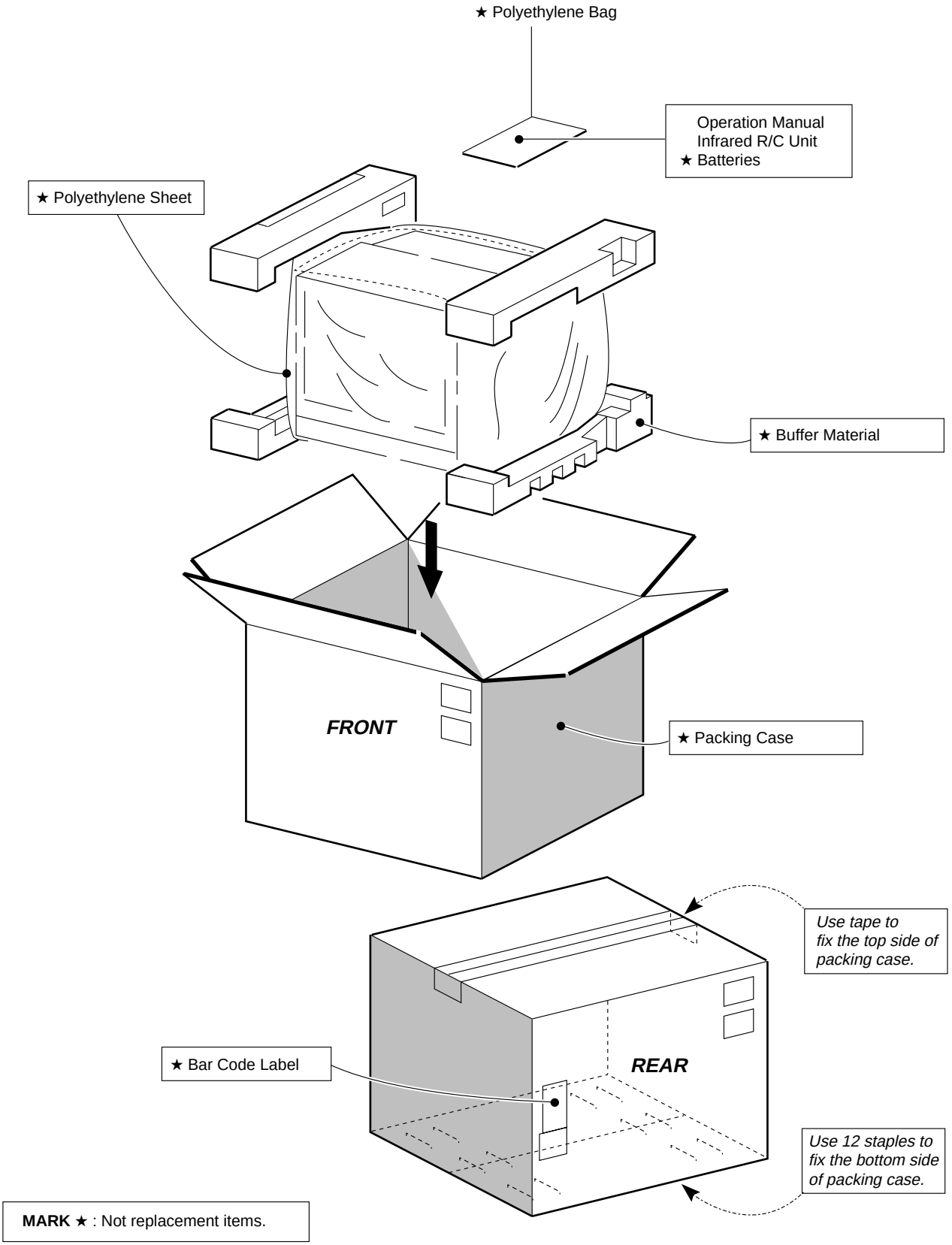
PACKING PARTS
(NOT REPLACEMENT ITEM)

SPAKC0157GJZZ	–	Packing Case	—
SPAKP0108GJZZ	–	Polyethylene Sheet	—
SPAKX0122GJZZ	–	Buffer Material	—
SSAKA0101GJZZ	–	Polyethylene Bag	—

CABINET PARTS LOCATION



PACKING OF THE SET



MARK ★ : Not replacement items.

SHARP

COPYRIGHT © 2001 BY SHARP CORPORATION

ALL RIGHTS RESERVED.

No part of this publication may be reproduced,
stored in a retrieval system, or transmitted in
any form or by any means, electronic, mechanical,
photocopying, recording, or otherwise, without
prior written permission of the publisher.

Ⓓ JAPAN Ⓟ SEMEX TQ1195-S
Aug. 2001 Printed in Japan
MI. KG

SHARP CORPORATION
AV Systems Group
Quality & Reliability Control Center
Yaita, Tochigi 329-2193, Japan